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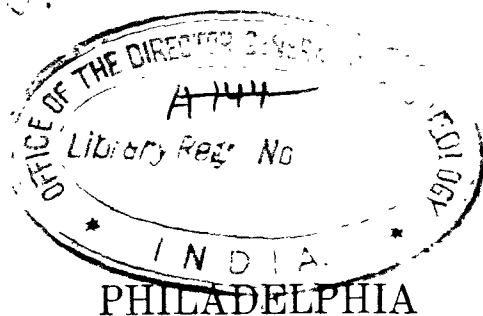
THE MUSEUM
OF THE
UNIVERSITY OF PENNSYLVANIA

THE MUSEUM JOURNAL

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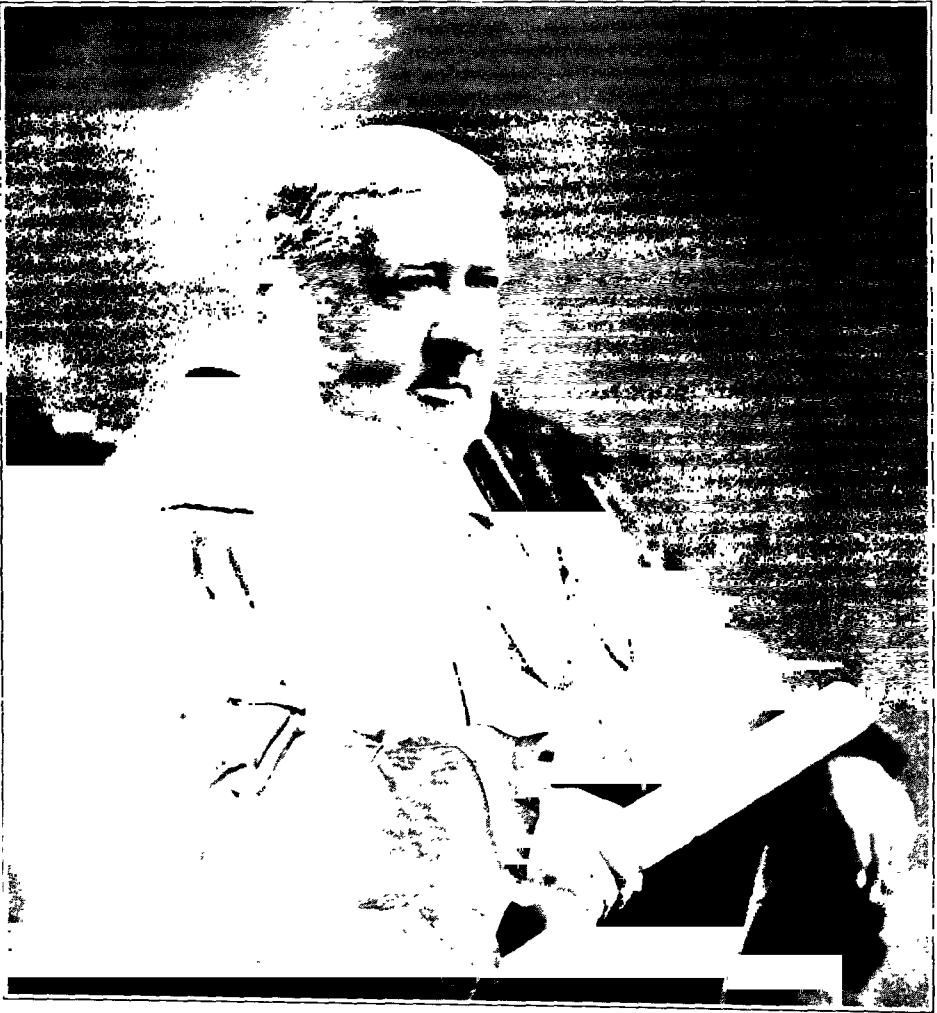
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CHARLES CUSTIS HARRISON, A.M., LL.D.

THE MUSEUM JOURNAL

Vol. XX

PHILADELPHIA, MARCH 1929

No. 1

DR. CHARLES CUSTIS HARRISON

ON the twelfth of February the news came of the death of Dr. Charles Custis Harrison, who, from 1917 to 1929, was President of the Board of Managers of the MUSEUM OF THE UNIVERSITY OF PENNSYLVANIA, having previously served the University as Provost from 1894 to 1911 and as Trustee of the University from 1876 to the day of his death. In the history of American education, there is probably no record of loyal, fruitful, unselfish service to an institution that excels the record of Dr. Harrison.

Charles Custis Harrison was born in Philadelphia in 1844. Receiving his early education at the Protestant Episcopal Academy, he entered the University of Pennsylvania in 1858, receiving the degree of Bachelor of Arts at the commencement exercises in 1862, and as the honour student of his class, he delivered the Greek oration.

After graduation, Mr. Harrison entered the sugar business, being connected with the Franklin Sugar Refining Company from 1862 until his retirement from its presidency in 1892.

Elected a Trustee of the University of Pennsylvania in 1876, he served as such until his death on February 12, 1929, a period of fifty-three years.

In 1894 he was elected Acting Provost of the University and in 1895 Provost, from which office he resigned in January, 1911. During the period of his Provostship the University grew and prospered in every way. In addition to the establishment of the George Lieb Harrison Foundation for the encouragement of liberal studies and the advancement of knowledge with an initial fund of \$500,000, which at the present time has accumulated until it now represents over \$1,000,000, Dr. Harrison was directly responsible for the erection of the following buildings put up during his term as Provost: Twenty-eight Dormitory Houses, John Harrison Laboratory of

THE MUSEUM JOURNAL

Chemistry, William Pepper Clinical Laboratory, Randal Morgan Laboratory of Physics, Medical Laboratory Building, Law School, Astronomical Observatory, Zoölogical Building, Engineering Building, Dental School, Houston Hall, UNIVERSITY MUSEUM, Gymnasium and Franklin Field, Athletic Training House, Veterinary Building, New Clinical Building of the Hospital, Isolation Building, Annex to Laboratory.

Since that time there have been erected Bennett Hall and the Irvine Auditorium, funds for both of which came to the University as a result of Dr. Harrison's great influence. It is interesting to know that over \$11,000,000 was raised by him for the University.

Upon his retirement from the Provostship in 1911, Dr. Harrison devoted himself to the financial problems of the UNIVERSITY MUSEUM, becoming President of its Board of Managers in 1917, which office he held at the time of his death. Under his care and direction, the MUSEUM became one of the great institutions of its kind in the world. Two important wings have been added to its building and innumerable treasures of the race added to its collections. As President of the UNIVERSITY MUSEUM, Dr. Harrison was instrumental in raising for all purposes a sum amounting to \$4,000,000. During his lifetime, Dr. Harrison received the degrees of A.B., University of Pennsylvania, 1862; A.M., University of Pennsylvania, 1865; LL.D., Columbia 1895, Princeton 1896, Yale 1901, University of Pennsylvania, 1911.

The achievements of a great man must be set down so that those who come later may know why his memory is preserved, what were his accomplishments and wherein he may be emulated.

To some of us Dr. Harrison will always be set apart, a personality who has entered our consciousness to influence our minds, our hearts and our souls for all times. We know of his integrity, of his acumen, of his ability, of his generosity, of his kindliness—such knowledge is a blessing.

JOSIAH H. PENNIMAN.

UR OF THE CHALDEES: MORE ROYAL TOMBS

By C. LEONARD WOOLLEY

THE discoveries of royal tombs at Ur by Mr. Woolley during the seventh campaign of the Joint Expedition have come near to rivalling those of last year. Next to the tomb and the death pit, Mr. Woolley has now found traces of a shaft connecting pit and surface and expects that new facts will support his theory.

Mr. Mallowan arrived at Ur on the tenth of December and was charged with the clearing of the chambers along the front of the Nannar temple. The Rev. E. R. Burrows and Mrs. Woolley completed the staff.

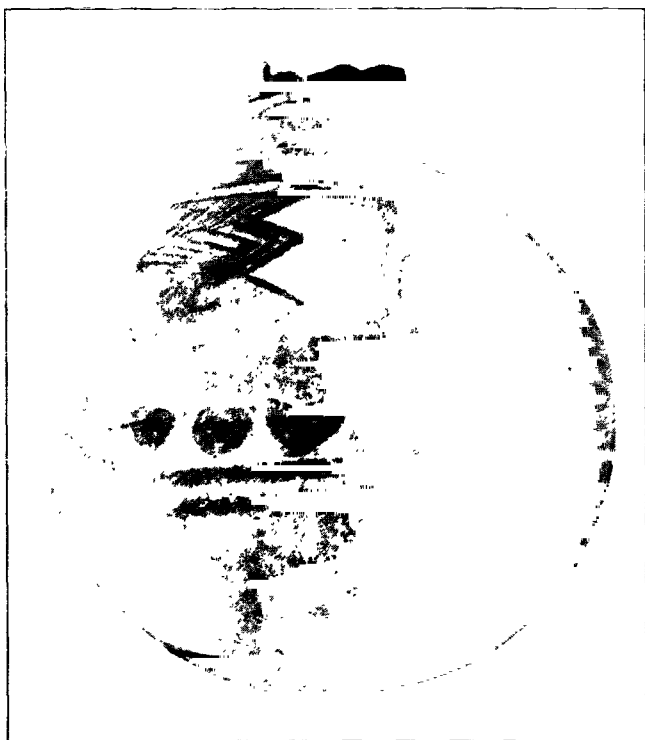
L. L.

STRATIFICATION

The first month of our new season at Ur has not indeed produced treasures to eclipse those of last winter, when we discovered the tombs of the ancient kings with their wealth of gold and their array of human victims, but it has brought us, together with many objects of first class importance, more information about the ritual of those royal funerals.

All over the cemetery the upper levels have been disturbed by the grave diggers of a later period and in half of the area worked by us during November grave robbers, house builders, and layers of drains had made havoc of the site, but in the other half conditions were simpler and it was possible to observe as never before the vertical relations between successive strata; factors which elsewhere had vanished altogether or survived only as isolated and meaningless fragments we could here connect into a scheme. Here the evidence on the whole strongly corroborates the chronological scheme suggested by me two years ago; the Sargonid graves are clearly distinguished by the types of pottery and weapons, etc., the First Dynasty graves come close to these in level and have often been disturbed by them, and then after a comparatively barren stratum come those of the early series with their distinctive furniture. Certain modifications of my previous arguments are enforced by observations made under better conditions, but the main thesis seems to hold good.

One grave which I would assign to the latter part of the early period contained an object of very great value for comparative dating—a complete painted clay vase of the later Jemdet Nasr type. This is the only example of this ware yet encountered by us. It must be an importation at a time when Sumerian pottery was exclusively monochrome and it appears to support the view I have already put forward that the Jemdet Nasr ware is northern and



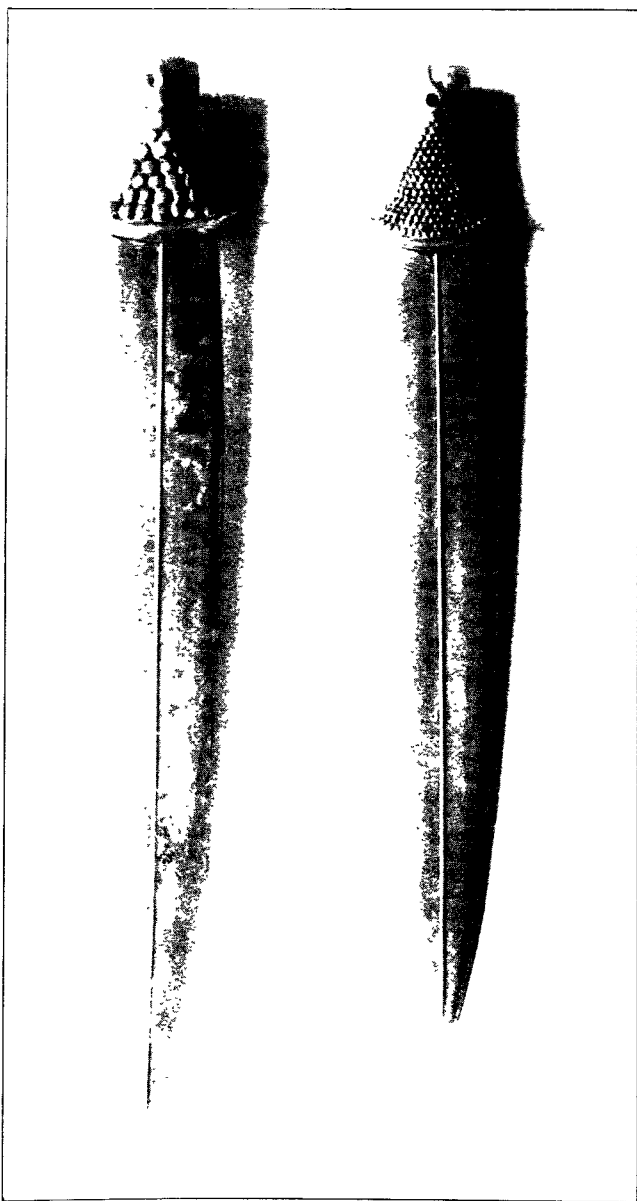
Painted pot of the Jemdet Nasr type.

Akkadian, not Sumerian, and that in the north its manufacture continued until the native Akkadian culture had been swamped by the Sumerian, i. e., until the rise of the First Dynasty of Erech if not until that of the First Dynasty of Ur. At any rate it must mean that the Jemdet Nasr culture, though earlier, is not much earlier than that of our first series of graves.

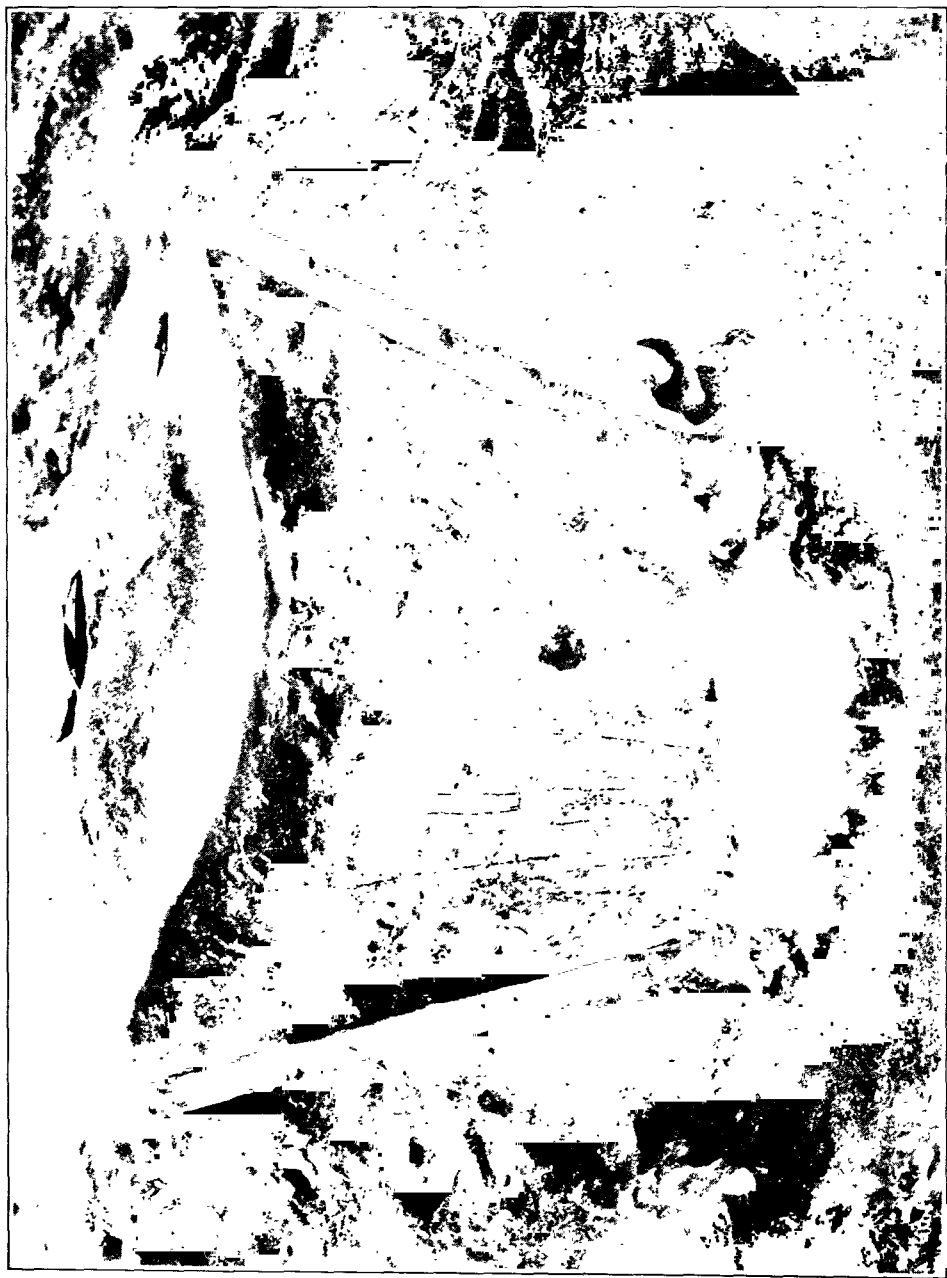
FIRST SHAFT: DEATH PIT WITH FORTY BODIES

Last year we recovered the ground plan of a king's grave; this year we have traced the sections of such graves and they are hardly less illuminating. The first clue was given by the discovery,

not very deep down, of a layer of reeds extending up to the mud brick walls of what seemed to be a small room. The reeds were removed and under them, crushed to fragments by the weight of the soil, were innumerable clay pots, animal bones, and several human skeletons, all lying on a floor of beaten clay. It was easy to recognize that these things had been buried from the outset, were in fact an underground votive deposit, and that the building which contained them was a subterranean building; closer examination showed behind the walls an earth face cut at a gentle slope, so that the building lay in a vertical shaft. The theory arose that at the bottom of that shaft there would be a royal tomb and that when the king had been buried and his retainers duly slaughtered around him and the earth thrown back above their bodies then at intervals votive offerings would be laid in with the earth and at a certain stage the filling in of the shaft would be stopped and a chamber or chambers would be constructed in it to receive the last offerings; then more earth would be poured in and perhaps a superstructure in the form of a funerary chapel would complete the whole. So



The gold dagger blades of King Mes-kalam-dug.

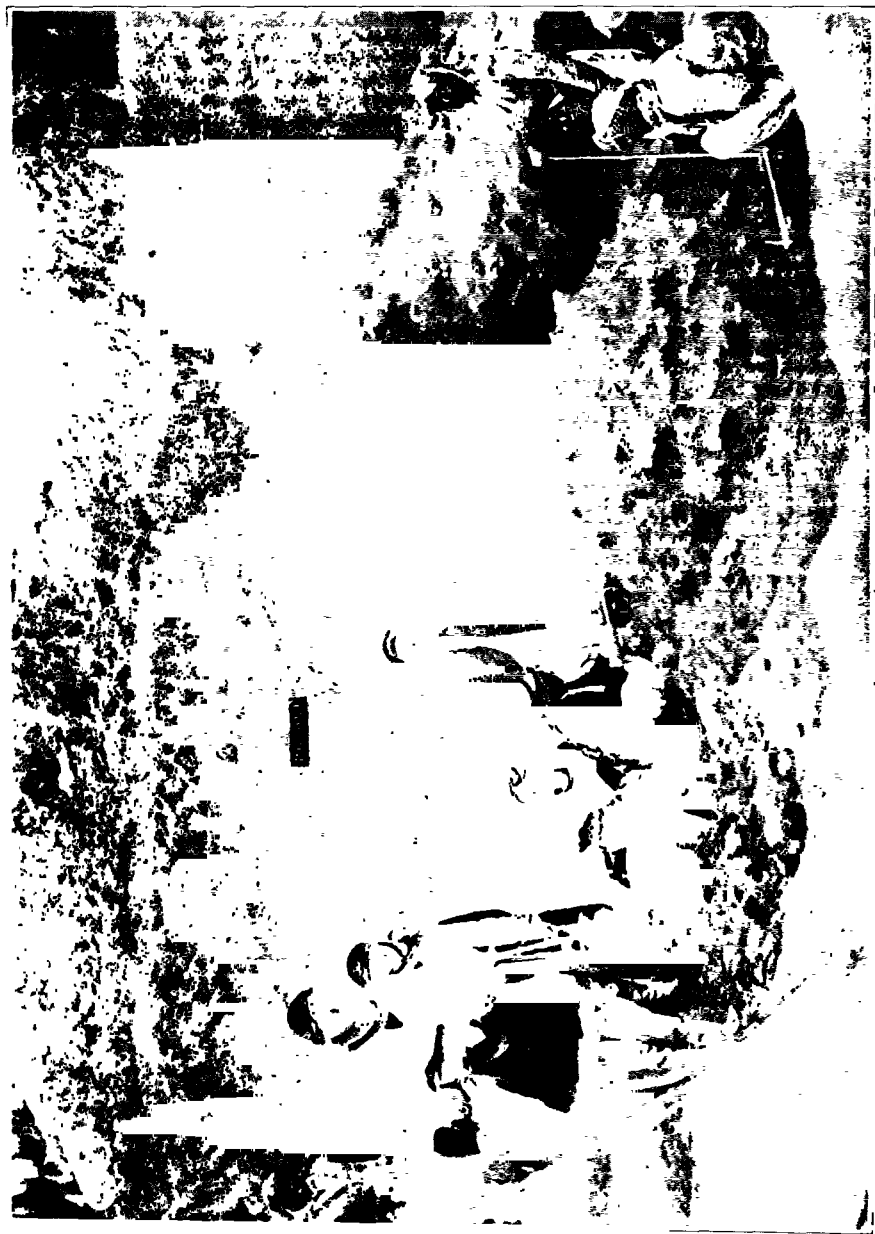


Plaster cast of the harp still in the soil. The strings can be seen on the left.

much for the theory; in fact we have dug down some twenty feet below the layer of pots, finding every now and then a fresh group of offerings or a subsidiary burial, and at the bottom we have found not indeed the tomb chamber of the king, which must lie under the mass of soil not yet excavated, but the "death pit" inseparable from it; in this open part of the shaft measuring less than twenty feet by ten, there are crowded, more or less in ordered rows, the bodies of thirty-nine women and one man.

SECOND SHAFT: SEAL OF MES-KALAM-DUG

Another shaft opened more sensationally with a wooden box in which were two daggers with gold blades and gold-studded handles and a cylinder seal inscribed "Mes-kalam-dug the King", a relative, one must suppose, of that prince Mes-kalam-dug whose gold helmet was the glory of our last season. As the previous grave has produced the seal of a woman bearing the title "Dam-kalam-dug"—"the wife of the good land"—it must be supposed that *kalam-dug* is part either of a title or of a family name. Immediately below this came a coffin burial with stone and copper vessels and a mass of clay vessels extending over the whole brick building which was now found to occupy the pit; then more layers of votive pots and more subsidiary burials, all separated by floors of beaten clay or by strata of clean earth. There followed a long blank which made us fear that we might have lost the clue, but the shaft continued; in opposite corners of it there appeared heaps of wood ash and, lower down, clay cooking pots and animal bones, the relics of a funeral feast or sacrifice made in the pit itself. The reason for the fires being precisely at the level at which they were found soon became obvious, for half way between them were found lumps of limestone set in clay mortar which spread outwards and downwards until from a border of carefully smoothed clay there rose intact the stone roof of a domed subterranean chamber, corbel-built of limestone rubble set in clay mortar: a little above the springers, holes through the masonry containing remains of wood showed that a solid centering had been employed for the construction of the central part of the dome, the stones being laid in position over a heap of light earth and straw carried by beams and matting. On the flat space round the dome funeral fires had been lit and had burnt for some time before the shaft was filled in for the construction of the subterranean building higher up. With the ashes of the fire were mixed animal bones.



Clearing the crown of the stone dome of P. G. 1054. Beam holes for centering are visible.

The domed building had been constructed at one end of a pit dug at the bottom of the main shaft, three of its walls being against the pit's sides and one, in which was the door, open to the court reserved in the prolongation of the shaft; this door had been blocked with large stones. Apart from a certain amount of natural subsidence, walls, dome and door were intact, though the latter was very difficult to detect, so closely did its blocking resemble the rough wall face, while the shifting of stones had disguised the outlines of the doorway. Through the beam holes it was possible to see that the floor was covered with some object of panelled wood, through the decayed remains of which protruded several large copper vessels and one of gold.

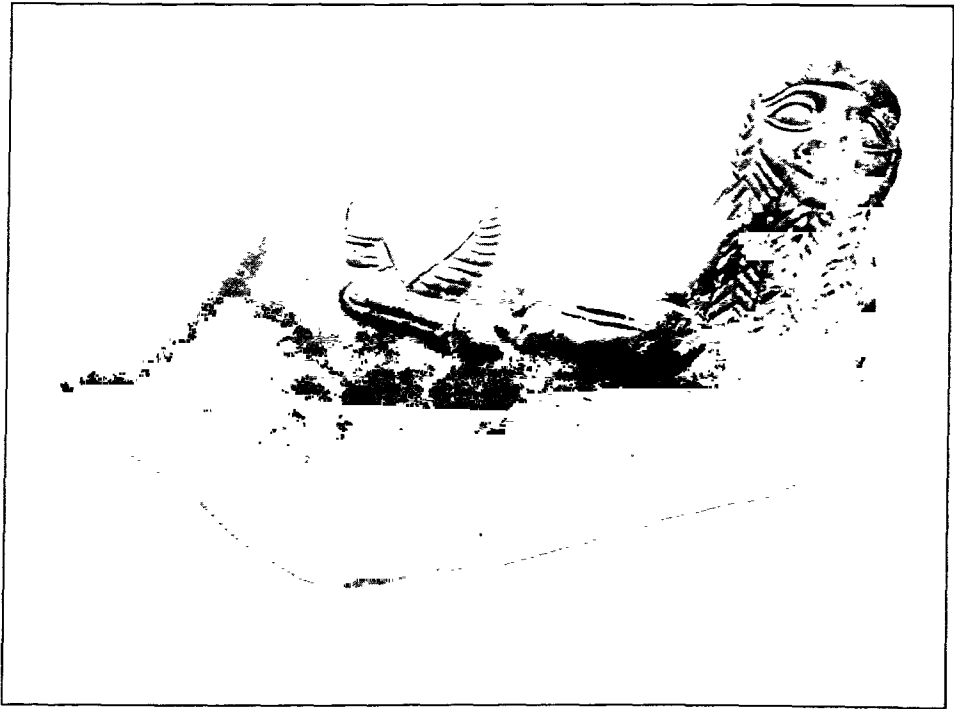
Considering how elaborate the tomb structure was, the contents were simple. Below the woodwork, which seems to have been a canopy, there lay six bodies of which four were servants or soldiers, men distinguished only by the wearing of copper daggers, and one apparently a maid servant; the sixth body, laid out in the centre, was that of a woman wearing a wreath of gold beech leaves and another of ring pendants strung on carnelians, gold earrings, finger rings, necklaces of gold and carnelian, gold hair ribbons, and a frontlet decorated with a star rosette and secured by long gold wires; on the breast was a carnelian-headed gold pin of the bent type not hitherto found in precious metal, and a gold cylinder seal having two registers of design in one of which is shown a banquet and in the other musicians playing on harps and other instruments; by the hands was a fluted gold tumbler much like that found in Queen Shub-ad's grave but not quite equal to it in quality. The bodies rested on a floor of mud bricks and smooth clay; this was curved so as to present the appearance of a vault and gave out a hollow sound when hit; it was therefore lifted, and below it was found a stratum of broken pottery and a very large vertical drain, which, however, only went down some fifty centimetres into the soil; below it there seemed to be the original debris in which the early graves are dug. The excavation of the tomb is not finished, as the court in front of the door of the domed chamber has yet to be cleared: further work should throw more light upon what are the most completely preserved though not the richest of the royal graves, but already we have evidence of a much more complicated ritual than could be deduced from last year's results.



Silver bowl with repoussé design.

PRIVATE GRAVES

Of the private graves one of the best was that of a very young child perhaps three or four years old. Besides a set of stone vases the little shaft contained a group of miniature vessels in silver and on the body were miniature gold pins, while on the head was a miniature wreath of gold beech leaves, another of gold rings, and one with pendants of gold, lapis, and carnelian. Another child's grave contained a fine head ornament, a chain of triple beads in



Alabaster lamp. U. 11799.

gold, lapis, and carnelian, with a large gold roundel of cloisonné work and two others of wire filigree. A woman's grave produced, together with many other objects, the remains of a harp similar in type to that of Queen Shub-ad though simpler in character, in that it had no animal's head and was decorated with silver instead of gold; a very important feature was that the woman wore on her head, as well as the normal beech leaf and ring wreaths, a diadem decorated as was the second diadem of Queen Shub-ad, with pomegranates and figures of animals in gold over a bitumen core; the workmanship is much inferior, but the parallel is very striking.

A very interesting discovery was that of another harp. Two holes in the soil were noticed by a workman and after examination were filled by me with plaster; the earth was then cut away and more plaster work was done where the decay of woodwork had left hollows. The result was a complete cast of a wooden harp decorated with a copper head of a bull. Further clearing exposed the remains of the actual gut strings, mere hairlines of fibrous white dust but,

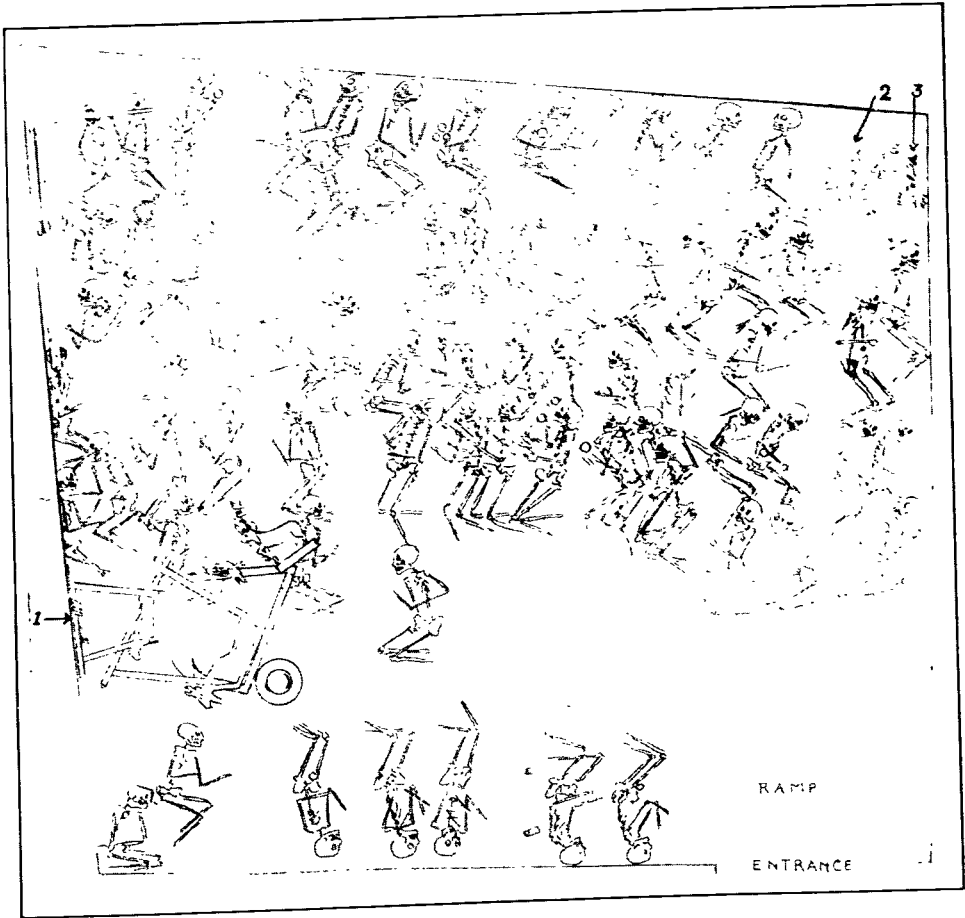


Copper head of a horned god, with eyes and eyebrows inlaid.
U. 11798.

even in the photograph, perfectly clear as the ten strings of the instrument. It was the more interesting as this is a harp not of the type of that found in Shub-ad's grave but resembling those figured on the shell plaque from the gold bull's head found last year and on the "standard," having the strings attached by tying (not by metal keys) to a horizontal beam.

The grave with the ruined harp of the type of Shub-ad's also produced a silver bowl, unfortunately in very bad condition, deco-

rated with a design of wild goats in repoussé work walking over mountains represented in the conventional way by engraved lines; this is the first example that we have found of this technique in silver. Another technical novelty was given by the imprint on mud of a piece of wooden furniture, itself completely decayed, decorated with engraved designs (the engraved lines filled with



Plan of the death pit showing bodies and objects in position: the harps on the left, the statues of rams in the upper right.

colour as in the case of shell plaques) and with carving in low relief; the possibility of ever finding the actual wooden objects preserved is so small that evidence of their character is the more interesting.

An alabaster lamp with a figure of a man-headed bull carved in relief on its base shows a variant from the type given by a similar but later lamp found last season. Perhaps our best object is a copper sculpture in the round of a human head with bull's ears



Group of harps in position.



The gold bull's head from the first harp.

and horns, probably a unique piece; this was found loose in the soil, not associated with any grave, and its use is also uncertain.

THIRD SHAFT: HARPS AND RAM STATUES

In one part of the work there had been for a long time signs which seemed to portend a royal tomb and at last the pick-men detected the shelving sides of an ancient pit-shaft. As the filling of this was removed we found that only one end of the shaft lay within the area at present being cleared, the rest ran on under the twenty-five feet of earth where as yet no digging had been done, so that for the moment we could clear no more than a section of a shaft whose total area must remain unknown. The rim of a very large copper vessel was the first thing to be found, then another appeared next to it, and then the black stain of decayed wood; very careful clearing laid bare the wheels of a wagon, a perfect impression of a thing which had itself long since vanished, but on the soil could be distinctly seen the grain of the different planks of which the wheel was made, the curve of the rim and the stump of the axle; in front of it, in the part which we could excavate, lay the skeletons of two asses and a groom and amongst the bones the line of silver and lapis lazuli beads which had decorated the reins: it was just such a wagon as we had found in the king's grave last season.

The mud floor on which the wagon stood had been covered with matting and towards the sides of the shaft this rose steeply up as if in the centre it had sunk beneath the weight of the wagon and its team. That could only have happened if the soil beneath them was soft and had recently been disturbed, so we dug down by the side of them and discovered some three feet below, the skeletons of other animals, sheep and cattle, a collection of copper vases and weapons, and the bones of a man. Here was a novel feature; the bodies of the victims and the offerings had been placed in the grave pit, earth had been heaped above them and stamped down and mats laid over the top, and thereafter the wagon had been driven in and the slaughter of beasts and of grooms had been a later act in the burial tragedy.

It was probable that the wagon stood immediately in front of the entrance to the shaft, so digging was continued behind it and the sloping earth side was traced back for some distance; but to our surprise this proved to be the side not of a narrow passage ramp but of a pit some twenty-five feet square, a "death pit" larger



The silver harp, No. 2.

than any we have yet encountered, and the whole of this is covered with the bodies of human victims laid out in ordered rows. For more than a week we have been at work clearing the last nine inches or a foot that covered the floor of the shaft and a third of the space still remains to be examined, but already we have listed forty-five bodies, of which thirty-nine are women and six are doubtful. And the riches of them are astonishing. In the king's grave last year



The silver harp with a statue of a stag. The remains of a copper stag are seen above.

we found nine court ladies wearing headdresses of gold and semi-precious stones; here there are already thirty-four such, and for the most part far more splendid—the best only less remarkable than the headdress of Queen Shub-ad herself, gold hair ribbons, wreaths of gold leaves and flowers, inlaid pendants, great lunate earrings, silver “combs” with flowers of coloured inlay, pins of silver or gold, necklaces of gold and lapis row upon row, a wonderful group of regalia. Nor are these all the contents of the pit. In one corner



The ram caught in a thicket. Front view. Composite figure in the round of gold, silver, and shell.

there lay folded up on the top of the bodies a sort of canopy whose ridge-pole was decorated with bands of gold and coloured mosaic over silver and the uprights were of silver with copper heads in the form of spear-points hafted with gold, while shell rings held up the hangings. In another corner were harps. Of one the sounding-box was decorated with broad bands of mosaic, the upright beams encrusted with shell, lapis lazuli, and red stone between bands of gold, the top bar plated with silver; in front of the sounding-box was a magnificent head of a bearded bull in gold and below this shell plaques with designs picked out in red and black. A second instrument of the same type was entirely in silver relieved only by a simple inlay in white and blue and by the shell plaques beneath the silver cow's head in front of the sounding-box. Below these was found a third harp of a different sort; the body, made of silver, was shaped rather like a boat with a high stern to form the back upright; the front upright was supported by a silver statue of a stag nearly two feet high whose front feet rest in a crook of the stem of a plant, made of copper, the long arrowlike leaves of which rise up on each side level with the horns. An exactly similar figure of a stag but made of copper and mounted on a square copper base lay alongside; possibly it was the decoration of yet a fourth harp the body and uprights of which had been of wood, now decayed; unfortunately the copper too was terribly perished, and though we succeeded in lifting it it can never be more than the wreckage of itself, whereas the silver animals, though crushed, are on the whole very well preserved.

Another corner of the pit yielded two objects absolutely unique in our experience—a pair of statues in the round of rampant rams. The heads and legs of the beasts are of gold, the horns and the long hair over the shoulders are of lapis lazuli, and the fleece over the rest of the body is of white shell, each tuft carved separately; the belly is of silver. The animal is reared right up on its hind legs, so standing twenty inches high. On either side of it are tall plants whose stems, leaves and large rosette-like flowers are of gold, and to the stems of these the front legs of the ram are tied with silver bands. The composition is precisely that to which we have been accustomed by the engravings on shell plaques, but here we have it executed in the round, on a large scale and in precious materials; the workmanship is admirable and the colour scheme is most striking. Baroque as they are, these gay statues seem to be rather of



The second ram, seen in profile in the ground.

the school of Benvenuto than products of early Sumerian art as we should have imagined it. It should be added that they are to be judged not as free art but applied, for a socket above the shoulders of each ram shows that they were really the supports for some article of furniture or ornament which has disappeared, leaving no more trace of itself; whatever it was, it was a very gorgeous object.



Limestone mace head U. 11678.

The "death pit" has still to be cleared of its remaining gold. In the meantime we are digging down from the modern surface in the hopes of finding beneath it the actual tomb to which this should be the introduction.

THE GREAT STONE TOMB

With the clearing of the "death pit" we finished up the area selected for the first stage of our season's dig. The number of graves dug this season already exceeds three hundred and fifty, and

the small objects from them have been excellent. Starting on a fresh section of the graveyard we obtained from the outset a piece of interesting information. Below the mud-brick Temenos Wall of Nebuchadnezzar, which we had to cut away, there lay private houses of the little known Kassite period (ca. 1700–1200 B. C.), proving that Nebuchadnezzar did not simply follow tradition but enlarged the sacred area of the city, probably so as to include new temples of his own founding. These buildings, and the brick tombs which lay beneath their floors, had disturbed the upper levels of the older cemetery, but in spite of this the ordinary graves of the Sargonid age (c. 2700 B. C.) produced, as we dug deeper, their accustomed harvest of gold and silver ornaments, stone vases, and copper weapons, and those of the First Dynasty of Ur, five hundred years older and lying lower down in the soil, were not less rich. Much more important was a royal tomb which underlay the rest. It was a single building measuring forty-two feet by twenty-six, built throughout of unhewn limestone; it contained four chambers, two small central rooms roofed with ring domes and two long flanking rooms with corbel vaults, all communicating with each other by arched doorways: inside, the roughness of the walls was disguised by a smooth



Shell inlay. Sumerian chief with axe, helmet and false beard.

cement plaster, and the same plaster was used for the floors. The tomb is indeed an underground house, and this fact throws new light on the beliefs of the oldest Sumerians and should explain why the dead king was accompanied by such a crowd of courtiers and domestics—his life was to continue in surroundings as like as might be to those of this world. Of the servants and court attendants there remained in this case little but scattered bones, for ages ago robbers had broken through the roof of the tomb and made a clean sweep of its contents. Some of the necklaces torn from the bodies had broken, and the floors were littered with lapis lazuli and gold beads, two silver lamps lay overlooked in a corner, there was a broken sceptre of mosaic work with gold bands decorated with figures in relief; but the great treasures which the tomb must have contained had vanished. It

was a disappointment of course, but we had the satisfaction of having found the tomb itself, a first class monument of this early age. How much the robbers had actually taken one can only guess, for not



Shell inlay below a harp.

all the royal graves were as rich as Queen Shub-ad's; we have just laid bare one "death pit" in which the ranked bodies were all quite poorly attired, with a few silver ornaments in the place of gold; but the pit rewarded us well, for against its edge stood a harp with a particularly fine calf's head modelled in copper and on the front of the sounding box a panel of mosaic work with human figures in shell set against a background of lapis lazuli, the technique of the wonderful "standard" discovered last season.

DEEPER LEVEL AND OLDEST TABLETS

Here too another discovery was made. The graves are all dug down into a vast rubbish heap which sloped down from the walls of the earliest Sumerian settlement to the marsh or river out of which it rose, and the bottom of this particular "death pit" just touched a stratum of rubbish, necessarily very much older than itself, wherein lay multitudinous nodules of dark-coloured clay; many were shapeless, but amongst them were written tablets and clay jar-stoppers bearing the impressions of

archaic seals. Not so old as the pictographic tablets of Kish, which we may expect to parallel from the deeper rubbish strata of Ur, these documents carry us back to a period in the city's existence not yet

illustrated by any other class of objects except crude figurines in clay of animals and men from which it would have been impossible to deduce the level of culture attained at the time.

LIMITS OF THE CEMETERY: THE PREHISTORIC CITY

The excavation of the ancient cemetery came to an end early in February and it was characteristic of the site that the very last grave discovered should be the richest of its period yet brought to light. It was of the Sargonid age, about 2650 B. C., and was that of a man, judging from the number of copper weapons placed at the head and along the side of the wooden coffin in which were the crumbling bones; amongst them were three of the largest spears that the cemetery had produced and with them a number of copper vessels, some unusually large, and a copper tray made to imitate basket-work and piled with bowls and vases of novel forms. Six gold fillets adorned the head of the man and round his neck were three strings of beads of gold and coloured stone, agate, carnelian, jasper, chalcedony and sard, stones which are rarely found before the time of Sargon of Akkad. On the wrists were four heavy bangles of gold and four of silver, and on the fingers were gold rings; by these lay two engraved cylinder seals of lapis lazuli capped with gold, and from one of the strings of beads hung a gold amulet in the form of a standing goat exquisitely modelled in the round, a real gem of miniature sculpture.

Having exhausted the graves in the area selected for this season's work we proceeded to dig down beneath them for relics of the older civilization represented by the great rubbish heaps in which the graves are set. In a stratum of this rubbish which is late in comparison with much that lies beneath it but very much earlier than the oldest graves, we were fortunate enough to find in a ruined house (for at one time the primitive settlement overflowed its normal limits and houses were constructed on the slope of the town's refuse dump) some two hundred tablets written in a very archaic script, one of the oldest forms of writing known in Mesopotamia.

Meanwhile work on the other side of the excavated area proved the northwest limits of the cemetery also. Our work here produced no graves but either stratified rubbish or superimposed house remains according as the limits of the early town fluctuated in times of greater or less expansion. Near the surface we came on a pavement of plano-convex bricks which could be dated as not later than 3000

B. C. and we dug down through successive floor levels to a depth of eight metres below this, by which time we were finding very early seal impressions on clay and pottery, painted or otherwise decorated, of types elsewhere occurring only below the ten-foot bed of clay which I have regarded as a relic of the Flood. For the full working out of the earliest history of Ur excavations on a large scale ought to be undertaken either at this spot or a little to the northwest of it.

With regard to the ancient cemetery lying on the slope below the walls of the settlement, we now know its width and further excavation of its length in either direction (probably little remains to be done to the northeast) can be carried on economically and with proper knowledge.

THE WALLS OF UR

Thoroughly to work out this prehistoric site was a task far too big to be tackled at the close of a season: content for the moment with the very important preliminary results which we had obtained, we turned our attention during the last ten days to the city wall, again with the idea not of complete excavation but of securing information which would enable us to draw up programmes for future digging. The results were immediate and surprising.

The spot chosen was on the northeast side, just behind the Expedition house.

Two days' work sufficed to produce the real town wall which has a total width of more than twenty-eight metres and is still standing more than eight metres high: we were able in the few days that remained of the season to follow it in both directions for a distance of over a hundred metres and to establish something of its character and history.

Apart from a few literary references to its building and destruction we knew nothing about the wall. More than this, very little is known at all about Sumerian defences, seeing that no expedition has yet undertaken the heavy task of clearing the circuit of an ancient town.

At Ur, the centre of the site is surrounded by a ring of mounds, not continuous, for whereas in some parts they stand high and present on the outside an abruptly sloping face, in others they sink to the level of the plain or are so confused by adjoining mounds as to lose all character: but even from the ground something in the nature of an outline to the inner city detaches itself from the tangle of slopes

and hillocks, and an air photograph shows much more clearly what can only be the defences of the town. The enclosure is an irregular oval about three-quarters of a mile long by half a mile wide; outside it the suburbs stretch for miles, inside it, like the citadel inside the bailey, lies the Sacred Area wherein most of our excavation has been done; within the enclosure levels average higher than outside and it is reasonable to suppose that it represents the oldest settlement; certainly it remained throughout history the administrative and religious centre.

The fortifications of the city were, naturally enough, repaired or reorganized a number of times; the earliest work that we have found dates to the Third Dynasty of Ur and is probably due to the founder of the dynasty, Ur-Engur (2300 B. C.), who explicitly claims its construction; we have reconstructions and additions by kings of Larsa (circ. 2000 B. C.), by Kuri-Galzu of Babylon (1400 B. C.), and by a later king whom we have not yet identified. Ur-Engur's wall seems to have consisted of two parts, a lower wall of crude mud brick and an upper wall of burnt brick of which, in the section cleared by us, nothing at all remains. But the mud-brick wall is an amazing structure. It stood some twenty-six feet high, its back vertical, its outer face sloped back at an angle of forty-five degrees, and at its base it measured not less than seventy-five feet in thickness! Really it served the purpose of an earth rampart along the top of which ran the wall proper, but it was itself built entirely of bricks carefully laid. Behind it the floor level was raised about twelve feet above that of the plain outside, though whether this was continuous over the city area or was in the nature of a platform backed against the wall we cannot yet say; judging from surface indications the former would seem to be the case. The sloped mud face of the wall must have suffered badly from weather and it was twice reinforced with revetments which added another eighteen feet to the wall's thickness; the authorship of these is still uncertain, but the first addition may well have been due to the Larsa kings part of whose superstructure is well preserved. In their time the levels inside the wall had risen almost to the top of Ur-Engur's mud brick. So far as the inner face of this showed, they revetted it with burnt brick and set up along the top of it a continuous row of buildings which served a double purpose; they were at once the burnt-brick wall crowning the rampart and living accommodations for citizens or officials, for their inner ground-plan is exactly that of the private houses excavated by us



Large stone tomb. First room before removal of the vault.

on the other side of the Temenos: in spite of their position and the fact that they are built to a general plan with bricks bearing royal stamps, there is nothing military about them. One is reminded of Rahab who dwelt upon the wall of Jericho and of some mediaeval city like Aleppo where the solid masonry of the ramparts rises up to merge insensibly into the flimsy window-broken backs of private houses.

We know that after a revolt against Babylon the "great walls of Ur" were destroyed by Hammurabi's son in about 1870 B. C. Then, and in the course of the next four hundred and fifty years, even the lines of the superstructure must have vanished, for we find a great gate-passage of Kuri-Galzu running athwart everything. It was strongly built with burnt bricks a large proportion of which bear his name, but everything else of his work has been destroyed by a later building, a fort lying inside the wall and probably (though our work has not gone far enough to prove this) flanking one of the city gates. Only the mud-brick substructures of this are left together with the burnt-brick facing of its outer wall on the northeast, but the foundations show that it was extraordinarily massive, even the inner walls being never less than thirteen feet thick. Notwithstanding this it appears to have been considered insufficient for the city's safety, for close to it on the northeast, just outside the lines of the old wall, we have exposed the greater part of a second external fort obviously of the same date though also of unknown authorship. It is a rectangle with double gateways leading to a central court; the walls, of burnt brick, are over twenty feet thick; it seems to be such a tower as we might expect to find guarding the entry to the town.

Under the floors of the Larsa superstructure there were many tombs of the period, and later graves, mostly of Neo-Babylonian date, were found higher up; these produced a good deal of glazed pottery and a few other objects. From one room we recovered a collection of tablets, apparently business documents in envelopes, of Larsa date; the packing of a drain yielded an unusual object in the form of a fragment of a large stone jar bearing an inscription of Dungi; and in the foundations of the late fort was found a small female head carved in the round from grey stone, with inlaid eyes, very much in the style of the marble head with inlaid eyes discovered three years ago, but smaller and not quite so good.

If we clear the whole circuit of the walled town, as we ought to do, we shall not only have a very wonderful monument—our present

work shows that—but for the first time we shall obtain an adequate picture of the system of military defence employed by the great builders of Sumer.

GREAT COURT OF THE TEMPLE

Work on the Nannar Temple has been of a very different sort and deals with much later dates. On Mr. Mallowan's arrival on the tenth of December, I engaged a fresh gang of fifty men and put them in his charge for the clearing of the chambers along the front of the temple, the courtyard of which we had cleared last season.

The general character of the building was already known from surface clearing; our object this year was to trace the details of its history, and in this we have been eminently successful. Vague fragments of wall were unearthed which belong to about 3000 B. C. and tell of a temple of the Moon God lying at the foot of a smaller and an older ziggurat than that which we see today. Ur-Engur built the present ziggurat and laid the foundations of the great temple to the patron deity of his city; the sanctuary lay against the northwest side of the tower, the huge outer court formed a lower platform whose containing walls covered a much wider area than the old temple. Ur-Engur did not live to finish his work, and his son Dungi built the superstructure, the pylon gateway at the entrance of the temple and the range of chambers which surrounded the courtyard on whose pavement stood the altars or bases of his father and himself and, in time, of his son Bur-Sin. After the downfall of the splendid Third Dynasty of Ur a king of Isin filled up half the courtyard with a massive brick structure whose meaning is not yet clear to us, and a later ruler, Sin-idinam of Larsa (c. 2000 B. C.), blocked the court still further with a base whose foundations go down to prehistoric levels. But these were minor changes; it was left for the Elamite king Warad-Sin to remodel the whole temple. He enlarged the building in three directions, putting up a new retaining wall for the terrace outside the old wall the stump of which was buried under the floor of his chambers, and the whole of the exterior and the wall of the courtyard facing the entrance were enriched with half-columns and recesses of burnt and crude brick. Five hundred years later what remained above the ground of Warad-Sin's work was dismantled and on its foundations Kuri-Galzu II of Babylon (c. 1400 B. C.) set up a plainer replica of the Elamite temple; much of the existing building is due to him. Apart from minor details,

such as the repaving of the court by another Babylonian king about 1180 B. C. and the raising of its level by the Assyrian governor Sin-balatsu-ikbi in the seventh century, the temple retained its character until the time of Nebuchadnezzar (600 B. C.). He built two new sanctuaries on the ziggurat terrace, raised the pavement of the great court virtually to the same level and added to the pylon gateway by bringing it forward into the court, with side doors to the northeast range of chambers which he masked by a curtain wall. The rooms cleared so far have not produced any tablets; two inscribed door-sockets have been found, but the best object is one which has no real connection with the present building, a limestone mace-head with figures of man-headed bulls in relief and an inscription, unfortunately much defaced, which may refer to a king of Mari and certainly belongs to about that period.

Thus we can now trace through its long life of two thousand five hundred years the vicissitudes of the greatest temple of Ur, and with its excavation have practically finished our work in this part of the city.



General view of the River Jalud, looking east from near the Expedition's house. In the right background is the north base of the tell and on the left the great northern cemetery.

THE PALESTINE EXPEDITION

REPORT OF THE 1928 SEASON

BY ALAN ROWE

THE excavations at Beisan, the ancient Beth-shan, were recommenced on August 27, 1928. The staff for the 1928 season consisted of Dr. I. Ben-Dor as archæological assistant, Mrs. Alan Rowe as recorder of antiquities, Mrs. A. Bomberg as secretary, Messrs. C. Kent and O. Avedissian as draughtsmen, Ahmed Effendi Abd El-Aziz as surveyor, Mr. G. Kavouksorian as bookkeeper and general assistant, and Fadil Effendi Saba as photographer. The workmen were under the control of Reis Saleh Abd El-Nabi who comes from Qift in Upper Egypt and who has been associated with the Expedition since 1926.

The excavations of the present season have been carried out in the following city-levels on the tell: (1) in the Thothmes III level; (2) in the pre-Amenophis III level; (3) in the Amenophis III level; (4) in the Seti I level, immediately to the west of the area where the Seti I temple, now cleared away, once stood; and (5) in the Rameses II level, in the western part of the fort. It is pleasing to be able to state that the antiquities discovered in all these areas have been particularly interesting and are really more important than those found on the tell during the 1927 season; and that the season's excavations have resulted in discoveries which are of the utmost importance for the ancient history of the Land of Canaan.

NO. IX CITY-LEVEL. THOTHMES III: 1501-1447 B. C.

The whole temple of Mekal has now been excavated and we are thus enabled for the first time to get a correct and full idea of its general plan. It is therefore necessary to make a few corrections in the provisional plan published in the *MUSEUM JOURNAL*, June, 1928, p. 169; the most important alterations being the removal of the "wall", which is now seen to have been but a mass of stones and débris, to the west of the so-called "corridor" leading to the northern temple, and the removal of the so-called "anteroom". The plan accompanying this report now shows the final details of

the temple and also the details of the great outer fort wall to the south of the level and of the new rooms excavated to the west and east of the temple.

THE TEMPLE OF MEKAL

Including the discoveries of this season with those of the last season, we see that the Mekal temple consists of: (1) A great courtyard to the west of the inner sanctuary. The entrance to the courtyard is on its western side, while the entrance to the inner sanctuary from the courtyard is near the southeastern corner of the latter place, adjacent to the wooden pole upon which, perhaps, the skin



Vignette from coffin of [Nesi-]Neb-Neteru in the University Museum, showing in the centre, the god Osiris, before whom is a pole with the skin of a calf attached. Cf. the pole in the Mekal temple of Thothmes III.

of a sacrificed animal was hung. This pole, which may be compared with the poles found near the temple of Amenophis III and published in the *MUSEUM JOURNAL*, June, 1928, p. 153, served the same purpose as the pole with the skin of a sacrificed calf attached, shown in the uppermost vignette on the coffin of the priest [Nesi-]Neb-Neteru in the *UNIVERSITY MUSEUM*. (2) An inner sanctuary containing a stone altar for meat offerings and a brick stepped altar for cult objects, etc. (3) A room south of the inner sanctuary containing the great stepped altar of sacrifice, etc. This recalls a stepped slaughter-house mentioned in a Punic inscription from Carthage.¹ (4) A room, east of the inner sanctuary, containing a great circular

¹ Cooke, *A Textbook of North-Semitic Inscriptions*, p. 130.

oven for roasting the animals slaughtered upon the altar of sacrifice. (5) A well, 43 feet deep, to the east of the oven room, used for supplying water to the temple. (6) A southern corridor which, being on a higher level than the courtyard, has a flight of steps leading up to it from the courtyard. (7) A great stepped altar, 16 feet 10 inches wide, in the western end of the southern corridor. (8) A small room situated behind the great stepped altar, containing two *mastabahs* or seats and a socket for a peg to which was probably tethered an animal. (9) A small room containing the *maszebah* or sacred conical stone, emblematic of Mekal, at the eastern end of the southern corridor. Even to this day, in Beth-shan the natives regard with some respect a certain stone column upon which they sacrifice small animals in fulfilment of vows made in the tomb enclosure of Sheikh Halabi, a local saint. This column, which dates apparently from the Roman period, is situated just outside the tomb. Nos. (2), (3) and (9) have been fully described in past reports and so, like the room north of the inner sanctuary, do not require to be dealt with here. The courtyard (No. 1) and the southern corridor (No. 6) have also been partially dealt with but must be referred to again as they are now fully cleared.

THE COURTYARD OF THE MEKAL TEMPLE

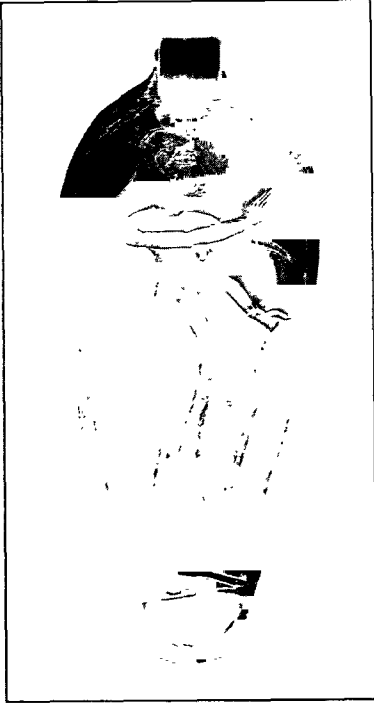
The courtyard of the Mekal temple, which temple, following the Arabs, we may well call *Haram esh-Sherif*, "The Noble Sanctuary", is of great and imposing proportions. Its maximum measurements are 82 feet from east to west and 114 feet from north to south. In ancient days, no doubt, the bulls to be sacrificed were adorned with the heavy bronze bull-and-lion pendant found in the 1927 season¹ and were led about in the courtyard in order that laymen might see and admire the animals to be offered up to the great Baal of the city, for the courtyard was the only part of the temple accessible to laymen. The head of a bull was found as an offering in a burial chamber of the Vth Dynasty at Beni Hassan² and in a small chamber in the tomb shaft of the recently discovered tomb of Hetep-heres, the queen of Seneferu, at Giza. As I have already observed in a previous report, some bones and the horns of a bull were discovered in the Mekal temple at Beth-shan in the 1927 season, and parallels with Egyptian ceremonies and concepts in-

¹ MUSEUM JOURNAL, December, 1927, p. 424.

² Garstang, *The Burial Customs of Ancient Egypt*, p. 32.

volving the sacredness and even the divinity of the bull at once suggest themselves. Compare, for instance, the famous ceremony of "The Running Round of Apis".

The finds in the courtyard of the Mekal temple are quite varied and numerous and include the following: (1) *Pottery objects*: (a) Hollow cones with flaring tops. These perhaps once had figures of some description surmounting them. They recall the copper figures of bulls surmounting cones which were employed as votive offerings



Gold pendant showing the figure of the goddess Ashtoreth holding the *was* sceptre. Thothmes III level.

in early Mesopotamian times.¹ (b) A Canaanite open pottery lamp. (c) A Cypriote milk bowl with wishbone-shaped handle. (d) The rim of a flat dish with five gazelles following one another, painted on it in dark red; also some fragments from the same dish, with three gazelles. This dish is unique. The gazelle was usually sacred to the goddess Ashtoreth. (e) Part of a so-called pilgrim bottle with two handles. (f) A rather well-made figurine of Ashtoreth showing the goddess wearing a scalloped headdress and having two bracelets on each wrist; her feet are broken off.

(2) *Basalt*: (a) A crude cylindrical incense altar with its top hollowed out for the incense. (b) A shallow dish for grinding colours; traces of some red colouring matter are still visible in it. A small lump of yellow ochre was actually found in the courtyard but not in association with the grinder. (3) *Gold*: (a) A flat pendant with a tang at the top twisted over so as to form a loop for suspension. On the pendant is incised the figure of a woman, who is nude except for a headdress of Egyptian type. She holds the *was* sceptre in her left hand and has her right hand outstretched. From the fact that she bears the sceptre she must be the goddess Ashtoreth, whose figure, once in the form of Antit, the warrior goddess, has often been found on the tell. (b) A lotus-shaped flat pendant with a loop handle of gold wire attached. (c) Another lotus pendant, shaped somewhat like the second example but with a broken tang

¹ King, *A History of Sumer and Akkad*, p. 256, figs. 62, 63.

suspension loop. (d) A fragment of foil. (4) *Bronze*: Arrowheads. (5) *Ivory*: A good spindle whorl with an incised geometrical design on its base. (6) *Faience and Steatite*: (a) A small quantity of faience beads and pendants. (b) A very nice steatite ring seal with a flower design on its hemispherical back and an inscription on its base. The inscription is somewhat corrupt and reads something like, "Gives the king devotion to Ra(?)." ¹ To the left of the text is the *ankh* sign of life enclosed in a cartouche. The seal is of XIIIth Dynasty date, about 1780 B. C. (c) A blue faience scarab with the figure of Ptah, the god of Memphis, holding the *was* sceptre, with the signs of "life" and "stability" in front of him. (d) A Syro-Hittite green glazed faience cylinder seal bearing highly conventionalized figures of animals or birds. (e) A Syro-Hittite blue glazed faience cylinder seal with figures of two crossed stags and a geometrical design. (f) A Syro-Hittite green glazed faience cylinder seal with the figure of a stag, a sacred tree, and a scroll design. (g) A Syro-Hittite white glazed faience cylinder seal showing a sacred tree with a rampant animal of some kind and a divine figure in human form, one on either side of the tree.

It will be seen that the courtyard was by no means barren of finds. The presence of the Syro-Hittite cylinder seals here and elsewhere in the level seems to indicate a northern influence in Beth-shan in the time of Thothmes III.

ROOM WITH CIRCULAR OVEN

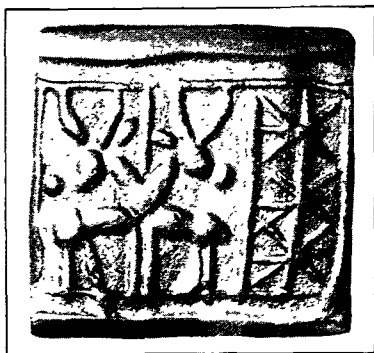
Immediately to the east of the southern part of the inner sanctuary and of the small room containing the *mazzebah* or sacred column² we discovered a large room having its entrance at the south near the mazzebah room. In the northern end of this room there is a great circular fireplace built of stone, about 6 feet 8 inches in diameter and 2 feet 3 inches in depth. Three pieces of bent bronze wire, ashes, charred bones, horns, etc., were found in the fireplace which must have been used for roasting the animals sacrificed in the temple to the deity. That one of these animals was a bull was proved by the excavations of last year. Among the remains in the fireplace there was also the upper portion of a figurine of the goddess Ashtoreth, represented as wearing a wig and supporting one of her

¹ Cf. Petrie, *Buttons and Design Scarabs*, pl. XI, Nos. 608-620, p. 19; and see also the *Ra-erdy* groups figured by Petrie, *op. cit.*, pl. XII, Nos. 638-644, p. 20.

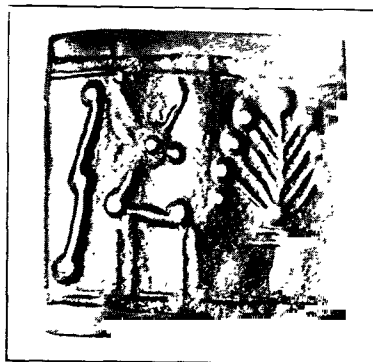
² See the plan of the temple in this article, p. 75.

breasts with her left hand; the figurine is scorched and seems to have been thrown into the fireplace as an offering. Lucian records that at Hierapolis in Syria, at the spring feast of the great Syrian goddess, various living animals were suspended on a pyre and the whole consumed. The Syrians of Harran, who clung to the ancient Astarte worship far into the Middle Ages, did the same thing.¹

From the same room in the Mekal temple came also the following interesting objects: (1) *Bronze*: A beautiful Syrian dagger, complete, with wood inlay in the handle; arrowheads; and a knife. (2) *Pottery*: Cypriote milk bowls with wishbone handles; a small bowl containing remains of food, including bone fragments; pots



Syro-Hittite faience cylinder seal showing the figures of two stags, and a geometrical design. Thohtmes III level.



Syro-Hittite faience cylinder seal showing the figure of a stag, a sacred tree, and a scroll design. Thohtmes III level.

somewhat similar in shape to modern flower pots, each having a hole in its base; a magnificent two-handled jar, 15½ inches in height, decorated with designs in dark red and black; and a bowl with two loop handles inside it. Objects which can be directly associated with the temple consist of the upper portion of a cylindrical cult object with two handles; a part of a serpent (?) cult object; and an entirely unique offering-dish on a hollow stand. This dish has a hole in its base which connects with the stand and was doubtless used for libations. Three cylindrical drainpipes (one broken), unearthed in the southern end of the room, perhaps belong to an intrusive drainage pit built of crude stones sunk in that part of the room, which belongs to the city-level above, *i. e.*, No. VIII or Pre-Amenophis III, 1447–1412 B. C. Drainpipes with handles came

¹ Cf. W. R. Smith, *The Religion of the Semites*, 3rd ed., 1927, pp. 470, 471. On the significance to the Hebrews of the burnt offering, see J. Hastings, *A Dictionary of the Bible*, iv, p. 334.

from the same level in 1927. Both types of pipes are found in Crete, of Middle Minoan I age (2100-1900 B. C.). From the bottom of the drainage-pit came a flint and also a faience scarab of Thothmes IV. The scarab shows the figure of the king holding an axe and wearing the battle helmet with uræus attached; before him is the cartouche containing his throne name: *Ra-men-kheperu*. This scarab is of great importance, as it gives further evidence of the correctness of the dating of our earlier levels, for Thothmes IV ruled in the latter part of the period corresponding to No. VIII city-level, which actually represents the reigns of Amenophis II and Thothmes IV. A scarab of Amenophis II was found in the northern cemetery in 1922. These two kings were the successors of Thothmes III, the founder of No. IX city-level; and Thothmes IV was succeeded by Amenophis III, who founded No. VII city-level. (3) *Various*: A quantity of beads; dishes, corn-mills and grinders of basalt; the horn of a gazelle; and a small opaque white glass seal with a tree-like design on it. Two important objects are a faience scarab and a small limestone amulet having a fish represented on one side and a conventional palm tree of Cretan design¹ on the other. The scarab shows a king holding a bow in his left hand, with his right hand uplifted. Before him is a serpent and behind him another serpent and a small tree.

Just to the east of the room containing the fireplace is a small room with a well, 43 feet deep and of an internal diameter of 2 feet 10 inches, sunk in it. This Canaanite well, which was made thirty-four centuries ago, is the oldest dated well that I know of in Palestine and was associated with the Mekal temple. Its sides are lined with brick down to a depth of 39 feet from its top, after which they are composed merely of the artificial débris into which the well is sunk. At the very bottom of the well is the original soil covering the low rock knoll on which the tell is situated; this soil is like alluvial sand. The height from the top of the well to the original top of the tell (No. I city-level: Arabic) is 42 feet; so that we now know that the Thothmes III level is actually the half-way point at this part of the mound. No evidence was forthcoming from the débris at the base of the well as to the date of the earliest level of occupation on the knoll. From the well itself came fragments of pottery of various periods, including some of the Middle Bronze Age, and thirty-two flints. Lying on the floor near the top of the

¹ See Evans, *The Palace of Minos*, vol. ii, part II, p. 496.

well were a few beads of faience and carnelian, some donkey's teeth, and the solar disk from the head of a faience amulet of the moon-god Khensu.

From rooms elsewhere in the Thothmes III level excavated this season came some lids of alabaster *kohl* (eye-ointment) jars, a small alabaster drinking cup on a stand, a donkey's molar tooth, a steatite scarab, and a seal of the same material. The scarab is probably of Middle Empire date (ca. 2000 B. C.); it has engraved on it a cartouche bearing the words *Kheper-neferui*: "The Form (*i. e.*, the king) is doubly beautiful." Above the cartouche are two *ankh* emblems of life and the *nefer* emblem of good luck or beauty; and below, the *nub* sign of "gold". On either side is a scroll design. The seal bears on one side of it the throne name of Thothmes III (*Men-kheper-Ra*) with two ostrich feathers typifying "truth" and, on the other side, the legend: "The favour and beauty [of] Amen-Ra."

THE SOUTHERN CORRIDOR OF THE MEKAL TEMPLE

The extreme length of this corridor is about 127 feet while its maximum width, west of the great stepped altar, is 25 feet. It is really one of the most impressive parts of the whole temple and must have looked very fine in ancient times when it was newly built. As we have already seen, a flight of steps, five in all, leads up from the floor of the courtyard to the corridor, the level of which is about 2 feet 8 inches above the level of the courtyard. The southern corridor, containing as it did the great stepped altar and the mazzebah emblematic of the god, was certainly reserved for the priests alone and there must have been a temple guardian stationed near the steps, doubtless in the small room behind the great altar, to prevent unauthorized persons from mounting them. From a panel having lions and dogs represented on it, which was found near the temple and is described in detail below, we know that the mythological guardian of the temple was a fierce hunting dog. Perhaps, then, an actual hunting dog was tied to the peg inserted in the socket found in the southeastern corner of the small room, the leash being of such a length as to allow the dog to reach the far side of the steps. We shall see presently how the Assyrians buried figures of dogs below their thresholds in order to repel the attacks of evil spirits who tried to make entry into the houses. With regard to the temple guardians, we are reminded of a certain Phoenician inscription from Kition, published by Cooke, *op. cit.*,

p. 66, which mentions "The men who have charge of the door [of the temple]."

On the southern side of the corridor near the west end is a part of the great outer fort wall of the Thothmes III level. There is a drain leading from a cement-lined room inside the angle of this wall, opposite the top of the small flight of steps, to a rather deep drainage pit built of undressed stones situated in a small room opening out of the corridor a little to the southwest of the steps, as shown in the plan. Including the room with the drainage pit, there are four small rooms at the extreme western end of the corridor. They were probably used for stores of some kind.

THE GREAT STEPPED ALTAR IN THE SOUTHERN CORRIDOR

This altar, like the rest of the temple, is made of bricks resting upon a foundation of undressed stones. It contains four steps in all, the lowest step being much deeper than the uppermost. There is a balustrade on each side of the steps. The width, over all, of the altar is 16 feet 10 inches and the depth 11 feet 10 inches; its height is about 3 feet. This structure is by far the most remarkable of its kind ever found in Western Asia. That it was connected in some way with the cult of Mekal is quite evident, for the mazzebah and stela of that deity were found in 1927 in the other end of the corridor in which the great altar is situated. Moreover, we discovered this year in the small room behind the great altar, a baetyl or small portable conical stone of basalt, 10 inches high, which is also emblematic of the god.¹

Various analogues to the stepped altars in the Canaanite temples of Thothmes III, Amenophis III, and Seti I at Beth-shan are to be seen in Egypt, as for instance at Queen Hatshepsut's temple at Deir el-Bahari, and in the river temple, tomb-chapels, and private house altars at el-Amarna. These el-Amarna buildings are not unlike our temples of Amenophis III and Seti I, with which apparently, at least in the case of the Amenophis III building, they had some indirect connection. With these may be compared also the entrance stairway of the temple of Nin-khursag at Al-'Ubaid.²

From various Egyptian representations we see sometimes the

¹ See Contenau, *La Civilisation Phénicienne*, pp. 125, 127, on the significance of these sacred conical stones.

² See Jéquier, *Manuel d'Archéologie Égyptienne*, p. 339; Peet and others, *The City of Akhetaten*, I, p. XLII, fig. 2, pl. XXVII, fig. 2, etc.; Schafer & Andrae, *Die Kunst des alten Orients*, 1925, p. 318; Hall & Woolley, *Ur Excavations*, I, *Al-'Ubaid*, pl. XXXVIII.

king seated at the top of a flight of steps and sometimes a god in a similar position. The Egyptian evidence indicates that the god, like the king, ruled from his seat on the top of the steps and it seems quite certain that the Canaanites of Beth-shan also believed that their deities sometimes dwelt upon the top of stepped altars, from which, no doubt, like their counterparts in Egypt, they ruled over their domains.

THE ROOM BEHIND THE GREAT STEPPED ALTAR

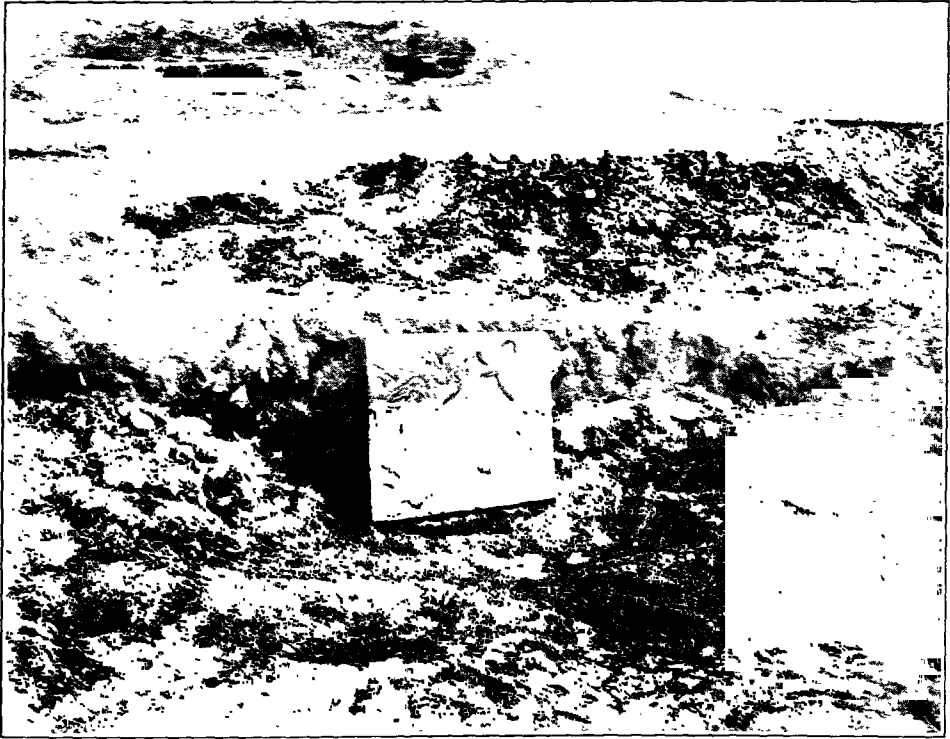
Immediately to the north of the great stepped altar in the southern corridor of the Mekal temple is a small room measuring 14 feet 6 inches from east to west and 16 feet 6 inches from north to south. It has two doors, one at the east leading into the great courtyard of the temple and one at the west leading out directly on to the middle of the flight of steps connecting the courtyard with the southern corridor. The south wall of the room is actually the wall against which the great outside altar is built. Running along the north wall and part of the east wall of the room, on the inside, is a low *mastabah* or "seat", 1 foot 10 inches wide and 1 foot 3 inches high. As we have already stated above, it seems fairly obvious that the room was intended for the use of the temple guardian, who was possibly accompanied by a large dog.

In addition to the basalt baetyl, there were found in the room a single-spouted Canaanite lamp of pottery, a flint, and an unbored barrel-bead of polished black stone.

THE GREAT OUTER FORT WALL

Immediately to the south of the Mekal temple is the great outer fort wall enclosing the southern end of the level of Thothmes III. For the greater part of its length the wall is a double one, of a maximum width over all of 15 feet 10 inches, with small rooms inside it, as shown in the map. Where the wall is a single one, *i. e.*, at the west end, the maximum thickness is 10 feet. The small room in the west end of the double wall, that is to say, towards the left-hand side of the map, has cement-lined walls and floor and contains in its northwestern corner the top of the drain already referred to in page 45 of this report. To the south of this room is a tower, 15 feet 6 inches wide and 5 feet 9 inches deep, at the maximum. The next room to the east has a blocked door in its north wall,

facing the great stepped altar; while the room to the east of that room contains a small cement-lined circular tank, 3 feet 6 inches in diameter and 3 feet 9 inches in depth; this tank has two circular depressions in it and must have been used for water. The next room to the east contains the top of a cement drain, which drain, after running under the northern part of the wall, evidently leads into a pit, as yet undiscovered, situated below the southern corridor of the temple. The exact purpose of these two drains and the tank has not yet been ascertained. At the eastern end of the outer side



View showing the basalt panel of the lions and dogs as found *in situ* in the Thothmes III level.

of the fort wall there are three great towers of a depth of 18 feet 10 inches, the average width of the two outer towers being 4 feet 7 inches and of the inner tower, 7 feet 9 inches. It was in the easternmost of the three bays formed by the towers that we discovered the basalt panel of the lions and dogs.

Other finds from various places to the south of the outer fort wall include the left arm and hand of a bronze figurine; part of an earring of the same material; a cup-and-saucer pottery lamp; and a blue frit scarab showing a uræus attached to a badly made crown

of North Egypt, with the bowl-shaped *neb* sign, usually meaning "lord", in front.

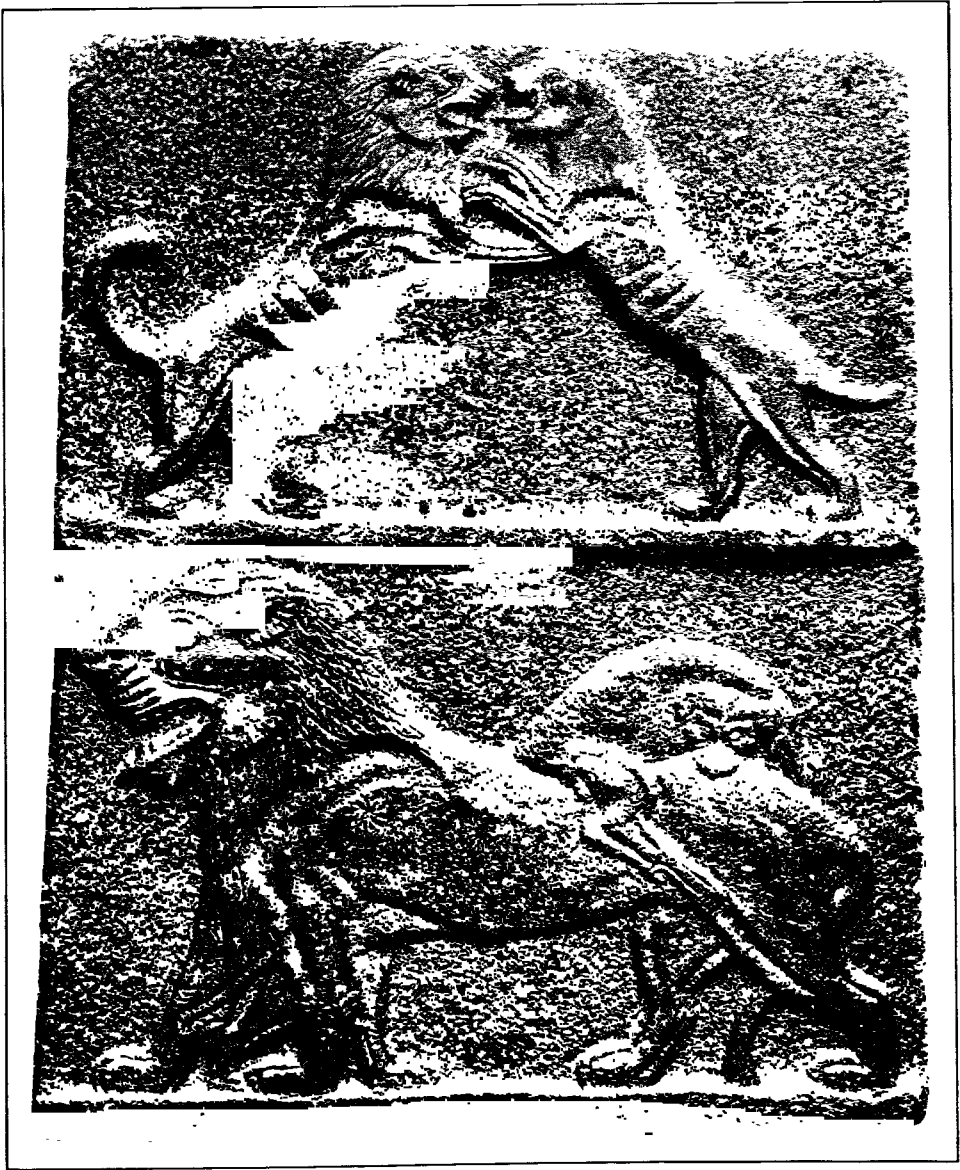
THE PANEL OF THE LIONS AND DOGS

The beautiful basalt panel showing the figures of the lions and dogs was found in the position described above on the morning of the twentieth of November, which is therefore a red-letter day in the annals of the Expedition. This panel was probably originally placed against the door of the Mekal temple, that is, one of the two doors of the inner sanctuary, one of which leads to the courtyard and the other to the outer room at the northeast of the inner sanctuary, as may be seen from the plan. The panel is sculptured in high relief and contains two registers; it is about 3 feet high.

Upper Register: This depicts a lion fighting with a dog. On the shoulder of the lion is a tuft of hair, somewhat resembling a star; a star is usually the indication of a superior being. The lion shows Mitannian and perhaps Assyro-Babylonian influences. A fragment of a stela indicating that Thothmes III fought against the people of Mitanni, a country to the northeast of Syria, was found this year at Tell el-Oreimeh, just northwest of the Sea of Galilee; this stela was published by Dr. W. F. Albright and myself in the *Journal of Egyptian Archaeology*, vol. XIV, November, 1928, pp. 281-287. The lion on our panel evidently represents Nergal, the god of plague and death. As the panel must have been set in the door of the temple, the dog thus guarded the entrance against the lion who brought death and destruction. The dog is like the dogs employed in the hunt, the finest specimens of which are preserved for us in the splendid sculptures in the palace of Ashurbanipal at Nineveh.

Lower Register: This depicts the majestic lion of Nergal being attacked by a dog who is biting his back. The lion has the star-like tuft of hair on his shoulder and is growling in rage. In Biblical times, as we see from *Jeremiah*, xlix, 19, there were lions in the Jordan Valley. Figurines of the lion have been found in various levels on the tell and the animal in question is represented on one of the shrine-houses discovered near the northern temple (dedicated to Antit-Ashtoreth) in the level of Rameses II.¹ The famous ancient Hebrew seal of "Shema', the servant of Jeroboam", found many years ago at Megiddo, not far northwest of Beth-shan, shows

¹ Figured in the MUSEUM JOURNAL, September, 1926, p. 294. See also the lion represented on the pendant found in the Mekal temple of Thothmes III in 1927. MUSEUM JOURNAL, December, 1927, p. 424.



The panel of the lions and dogs found in the Thothmes III level on the tell. The upper register shows the pestilence- and death-god Nergal (in the form of a lion) trying to enter the temple; the lion is being attacked by the guardian dog. The lower register shows the vanquished lion being finally driven out of the temple. Mitannian and perhaps Assyro-Babylonian influences are seen in the sculpture. Height of panel about 3 ft.

the figure of a raging lion. Important representations of lions are known from Sheikh Saad and Suweideh in Transjordan and on the famous incense altar of Taanach in Palestine.¹ Figurines of dogs came from certain levels on the Beth-shan tell and bricks with impressions of the paws of dogs were found in the Rameses II level.²

Summing up the significance of the scenes sculptured on the panel, it may be said that the upper register shows the lion trying to enter the temple and the lower register the same animal being driven away from it. It will be noticed that the tail of the lion in the former instance is in the air, and in the latter instance between his legs.

The Assyrians were in the habit of burying figures of dogs under the thresholds of their houses in order that the spirits of the dogs might repulse any evil spirits trying to make an entry into the houses. Five dogs were usually arranged on each side of the doorway and each dog was of a different colour.³ In the British Museum there are five of these coloured dog-figurines, with their names inscribed on their left sides: "Hesitate not, work thy jaws", "Conqueror of the foe", "Biter of his opponent", "Expeller of the wicked", "The strong of his bark".⁴ The names of the third and fourth are surely appropriate to the dog on the Beth-shan panel.

In the el-Amarna correspondence there is evidence that the god Nergal was worshipped in Palestine; the plague is actually called "the hand of Nergal". A cuneiform seal (ca. 2000 B. C.) found at Taanach speaks of "Atankh-El, the son of Khabsim, the servant of Nergal".⁵

Like Mekal, Resheph, and certain other Canaanite deities, Nergal was not only the god of pestilence but also the god of the blazing destructive heat of the sun; and in the code of Khammurabi he is said to "burn his people like a raging fire of swamp-reed."⁶ The association between Resheph and Nergal is clearly shown by Albright.⁷ The emblem of Nergal was the lion, into which, as we

¹ *Mitteilungen des Deutschen Palästina-Vereins*, 1904, p. 2; Vincent, *Canaan d'après l'exploration récente*, p. 184.

² MUSEUM JOURNAL, June, 1928, p. 167, and p. 68 of the present report.

³ Budge, *A Guide to the Babylonian and Assyrian Antiquities in the British Museum*, 3rd ed., p. 239.

⁴ *Op. cit.*, p. 221.

⁵ Smith, *Early History of Assyria to 1000 B. C.*, p. 337; Jeremias, *The Old Testament in the Light of the Ancient East*, I, p. 139; Sellin, *Tell Ta'annek*, p. 28; Clay, *The Origin of Biblical Traditions*, pp. 46, 47.

⁶ Harper, *The Code of Hammurabi*, p. 107.

⁷ *Mesopotamian Elements in Canaanite Eschatology*, Paul Haupt *Festschrift*, pp. 146 ff.

see from the so-called Dibarra legends, the god of pestilence changed himself; and Nergal, the God of the Underworld, appears in the form of a winged lion on a bronze plate.¹ A certain text states that on "the 18th of the month Tammuz, Nergal descends into the Underworld; on the 28th of the month Kislew, he ascends again. *Shamash (the sun) and Nergal are one.*"² It is a peculiar coincidence that we actually found the panel of Nergal in the month of Kislew! In an exorcism in which the dual nature of the god is further indicated, it is said of Nergal: "Thou shinest in the heavens, thy place is high, great art thou in the realm of Death."³

OTHER FINDS IN THE THOTHMES III LEVEL

A number of rooms were found in the area to the west of the courtyard and the southern corridor of the Mekal temple. In one of the rooms was a drainage pit made of undressed stones, with a cement lining covering the floor and walls of the corner in which the pit is situated. Another similar pit was found in an adjoining room just to the north of the outer fort wall. Both pits, when discovered, were covered with rough slabs of stone.

The finds in this western area include the following: (1) *Pottery objects*: (a) A cylindrical drainpipe, 1 foot 9 inches high, with male and female joints. (b) Dishes with stands. (c) Pots with painted geometrical, palm tree, and other designs. (d) A hollow cylindrical incense cult-object, 2 feet 6 inches high, which like the baetyl referred to on page 45 probably belonged originally to the great stepped altar in the southern corridor. (e) A small model of a pot set inside a bowl. (f) Potstands. (g) A fine goblet on a stand with decorations in dark red. (h) Two figurines of the goddess Ashtoreth, one holding a child in her arms—an unusual type. (i) Part of a flat tray with loop-handle. (j) A pot-handle with a scarab impression, showing the figure of a man with both arms down by his sides. (2) *Stone*: (a) Part of a limestone parapet projection of a fort wall (see page 54), afterwards used as a mould for bronze daggers. (b) A number of flints. (3) *Bronze*: (a) A fine scimitar, almost complete. (b) Arrowheads. (c) A small crudely made chisel. (d) A small chain containing several links. (4) *Ivory*: (a) Two inlays, one with

¹ Jeremias, *op. cit.*, i, p. 140; Maspero, *The Dawn of Civilization*, pp. 690, 691.

² Jeremias, *op. cit.*, i, p. 139.

³ *Loc. cit.* The suggestion that the lion on our panel represents Nergal was first made by my friend the Rev. Père Dhorme of Jerusalem.

part of an incised decoration on it and one with incised fish-scale design. (b) A hairpin with incised pattern. (4) *Glass*: A broken figurine of Ashtoreth *enceinte*, made of opaque green glass covered with white glaze. The goddess wears a headdress and supports her breasts with her hands. (5) *Faience, steatite, and lapis lazuli*: (a) Faience beads of various kinds. (b) A green glazed faience scarab with its device badly defaced; all that can be seen on the scarab are two *neb* signs, one above and one below the missing inscription. (c) A light green faience scarab with the figure of a man holding a lotus in his right hand; his other hand hangs down by his side. (d) A white steatite Syro-Hittite cylinder seal showing a figure in human form with crossed arms, an antelope (?), and geometrical designs. (e) A Syro-Hittite or Mesopotamian cylinder seal of lapis lazuli. This bears the figures of two gods and a geometrical design. The cylinder is rather small but is well cut.

From the area to the east of the temple of Mekal came the following scarabs and cylinder seals: (a) A crudely made pale blue glazed faience scarab with defaced device on back. (b) A green glazed faience scarab with the name "Amen-Ra". Underneath the name is the *neb* sign and to the left of it a crudely made lotus. (c) A very well made steatite scarab bearing the inscription: "Ra-men-kheper (*i. e.*, Thothmes III), the image of Amen." (d) A Syro-Hittite blue frit cylinder seal showing a god holding a sacred tree in his left hand. Before him are two stags and scroll designs. (e) A Syro-Hittite white glazed faience cylinder seal showing a line of conventionally made birds with a criss-cross pattern above them.

NO. VIII CITY-LEVEL. PRE-AMENOPHIS III:

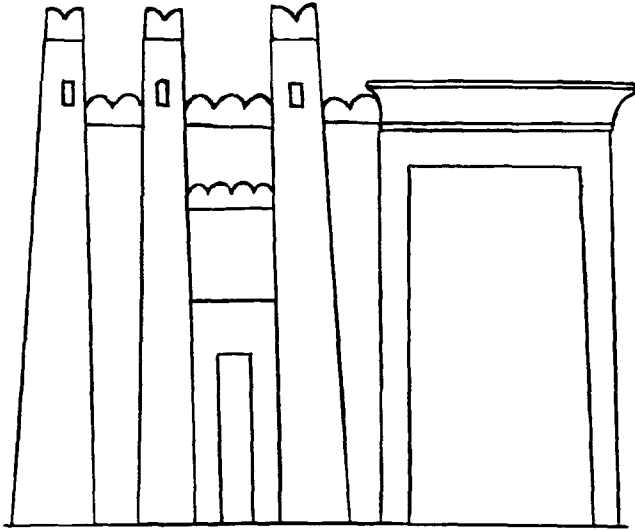
1447-1412 B. C.

During the latter part of the season three rooms of the Pre-Amenophis III level were found above and to the west of the great courtyard of the Mekal temple in the level of Thothmes III. In these rooms were uncarthed a bronze dagger, a white glazed faience scarab showing the figure of a lion with the *ankh* sign of life above it, an ivory inlay in the shape of a rosette, and part of the rim of a pot with traces of the bases of certain figurines which were once attached to it. Another room was found above and just to the north of the small room behind the great stepped altar of the Mekal temple.

NO. VII CITY-LEVEL. AMENOPHIS III, ETC.:

1411-1314 B. C.

In No. VII city-level immediately to the west of the area where the great temple of Amenophis III was situated, we have been fortunate enough to discover the almost complete foundations of a great building which appears to be a Canaanite *migdol* or fort-tower. We have cleared also the foundations of an adjoining building which may well have been the residence of the Egyptian commandant of the fort during the reign of this king. These structures, together with an enormous silo for grain discovered at the same time, are of the utmost importance and are quite unique in the history of



Ancient Egyptian representation of a fortified temple as shown in the Khensu temple at Karnak. Note the towers adjoining the gate.

our excavations of Beth-shan. The plan accompanying this article shows the relative positions of the *migdol*, the supposed officer's residence, and the silo; it also gives on a smaller scale the restored elevations of the western and southern sides of the *migdol*. The marching soldier depicted in front of the *migdol* is dressed in the usual uniform of the period. The *migdol* of Amenophis III is rectangular in shape with its entrance at the west. The entrance was originally flanked by two towers, only the northern one of which is now intact. A similar tower must also have stood at the southwestern corner of the fort a little to the right of the tower guarding the southern part of the entrance. Supporting towers such as these are a feature of most Canaanite *migdols* and forts; two of them

were found in the level of Rameses II and will be referred to later on in this report. But whereas the flanking towers of the Rameses II fort are separated from the main building itself, the towers of the Amenophis migdol are actually attached to the walls of the building. From the appearance of the exterior offsets in the northeastern corner it would seem that this particular part of the migdol was also really a tower. The model of the fortified temple which the king presents to the god in the Khensu temple at Karnak likewise has three towers near the gate. The actual entrance of the Amenophis migdol is practically the same as the entrance to the Hittite citadel of Carchemish.¹

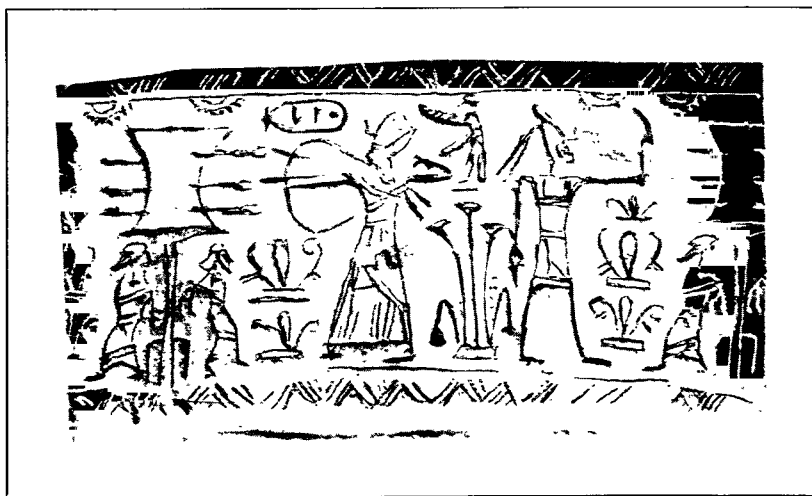
The maximum west to east length of the migdol, including the towers, is 76 feet 10 inches, and without the towers, 68 feet 7 inches; the maximum width from north to south is 50 feet 5 inches. A ramp of beaten earth or stones doubtless once led up to the entrance, the inside measurement of which at the wider part is 14 feet 4 inches and at the narrower part (*i. e.*, at the actual door itself, but not including the door jambs), 6 feet 3 inches. It is rather unfortunate that the whole of the southwestern corner of the migdol should have been destroyed by the builders of two stone walls of Roman and Byzantine date, respectively; but, in spite of this, the missing portions can be restored on the plan with some probability. As the migdol stands at present it contains four rooms but it is quite evident that there was originally another room, the position of which is indicated in the plan of the building. The L-shaped wall in the room in the northeastern corner is evidently the base of a stairway leading up to the outer wall at the south and it has been so restored on our plan. This southern wall has a very great thickness near the stairway in order, no doubt, to allow of the assembling of soldiers on its top. Taking the average height and width of each step at those of Canaanite steps found elsewhere on the tell, we get approximately thirty-eight steps in all, the topmost of which is about 28 feet from the floor level below. Therefore, allowing for a knee-high narrow parapet, surmounted by a series of cone-like projections of stone running round on the top of the exterior parts of the outer migdol walls and flanking towers, we see that the outer walls of the structure were approximately 30 feet in height.² We calculate that the towers of our migdol were about 35 feet high.

¹ Holscher, *Das Hohe Tor von Medinet Habu*, fig. 56, and cf. Woolley, *Carchemish*, II, p. 85.

² Cf. Maspero, *The Struggle of the Nations*, p. 128.

A part of what appears to be one of the projections in question was actually found near the gateway; it is of limestone. The original height of the object seems to have been 13 inches; its thickness is 3 inches, while its width at the base was about 18 inches. When the Egyptians attacked a fort of this description they sometimes advanced to the walls under cover of testudos and shook and dislodged the parapet stones with a species of battering-ram.¹

The average width of the outer walls is 7 feet 7 inches, which, with the exception of the outer fort wall in the Thothmes III level, is much greater than that of any Canaanite walls ever



Cylinder seal of stone found in the Southern Temple of Rameses II at Beth-shan in 1925. This seal shows the figure of Rameses wearing the battle-helmet and shooting an arrow at two of his Canaanite enemies, who are tied up to the pole of the standard of the fort, which consists of a shield pierced with three arrows.

Behind the king is the storm god Reseph-Mekal. Cf. p. 86.

found before on the tell. In three places just inside the outer walls themselves, namely, at the northeastern corner, the southeastern corner, and the middle of the southern wall, were found rectangular hollow places filled with huge undressed stones, which were of course employed to strengthen the walls and to prevent breaching. Also it is just possible that a long narrow slot in the outer eastern wall and a smaller slot in the outer wall to the west of the hollow place in the southeastern corner contained pieces of wood for further strengthening the building. Wooden strengthening-beams are found in most Egyptian fortresses in the Sudan and else-

¹ Wilkinson, *The Ancient Egyptians*, i, p. 242.

where but are usually laid transversely in the walls; the Anastasi Papyrus I published by Gardiner in *Egyptian Hieratic Texts*, i, p. 31, actually refers to beams of this kind. The north wall of the migdol consists for the most part of a large inner wall with a narrow wall built almost touching it on each side; this peculiar feature has not been observed elsewhere. All the walls of the fort are made of sun-dried bricks resting upon heavy foundations of undressed stones, usually basalt. The bricks were generally laid header by header; most of them measured 3 feet 6 inches in length, 1 foot 9 inches in width, and 6 inches in height. A few of them had the impressions on their bases of the dried reeds upon which they were placed in the brickmaker's field while in a plastic condition. The custom of placing bricks on reeds also obtained in Mesopotamia.¹ Somewhere above the fort must have been fixed its emblem, a target attached to a pole and pierced by three arrows. A cylinder seal bearing this emblem was actually found in the Southern Temple of Rameses II in the 1925 season. It is illustrated in this article, and we have used its design in restoring the standard above the Amenophis migdol on our elevations of the building. A very similar standard is shown in an Egyptian representation of the Hittite fort of Dapur, in North Syria, which fort is being attacked by Rameses II. This scene is published by Erman, *Life in Ancient Egypt*, p. 75, whence the illustration shown on page 86 of this article is taken.

THE COMMANDANT AND HIS TROOPS

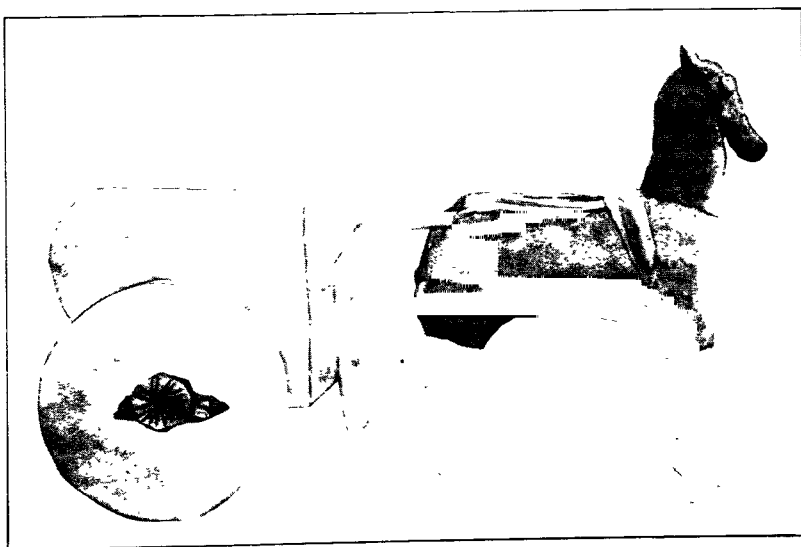
The migdol was doubtless meant to form the last place of refuge in the fort for the commandant and his troops in case the outer walls were breached. No traces of outer walls have as yet been found in the Amenophis III level although we know of them in the Rameses II and Thothmes III levels. Some day we may be lucky enough to find the name of the commandant of the migdol as we found that of the commandant of the fort of the time of Rameses II.² Many of the troops in the fort of Amenophis III consisted, no doubt, of Mediterranean mercenaries, the Sherdenen and others, who were probably officered by Egyptians, although, as we see from the el-Amarna correspondence, the actual rulers of the Canaanite towns were usually local chieftains trusted by the Pharaohs. The mer-

¹ Sayce, *Babylonians and Assyrians*, 1924, p. 138.

² MUSEUM JOURNAL, December, 1927, pp. 439, 440.

cenaries were buried in anthropoid pottery sarcophagi in the great cemetery to the north of the tell.

From various Egyptian papyri and ostraka we learn that the life of an ordinary Egyptian soldier, particularly in Palestine and Syria, was not at all a pleasant one: "Come, let me tell thee," reads an exhortation to schoolboys, comparing the pleasant life of a scribe with that of various other professions, "how woefully fareth the soldier; . . . he is brought, while yet a child, to be shut up in the barracks. . . . He is battered and bruised with flogging. Come, let me tell thee how he goeth to Palestine, and how he marcheth



Reconstruction after Egyptian drawings of a chariot model found in the migdol of Amenophis III.

over the mountains. His bread and his water are borne upon his shoulder like the load of an ass. . . . [He] hath no staff and no sandals. He knoweth not whether he is dead or alive, by reason of the lions. The foe lieth hidden in the scrub, and the enemy standeth ready for battle. The soldier marcheth, and crieth out to his god: 'Come to me and deliver me!' "¹ Even for the Egyptian officers, the life in Palestine or on the frontier between that country and Egypt does not seem to have been an enviable one. The Papyrus Anastasi, for instance, contains the laments of a certain officer who had to erect buildings on the frontier, probably somewhere

¹ Erman, *The Literature of the Ancient Egyptians*, English ed., 1927, pp. 194, 197. The Israel stela of Merenptah, however, indicates that in the time of peace the life of a soldier was not an unpleasant one.

near the site of the modern Kantarah on the Suez Canal, but who could do no work owing to the fact that, as he says in his own words, "I am without equipment. There are no people to make bricks, and there is no straw¹ in the district. . . . Mine eye glanceth furtively at the road, in order to go up to Palestine. I pass the night under trees that bear no fruit to eat. . . . The gnat (mosquito?) is there in the twilight . . . and it sucketh at every vein. . . .



Drawing of potsherd bearing a hieratic inscription reading *Seby (?) en Per-Deshrut*, i. e., "The Fiend in the House of the Ruddy Beings." Amenophis III level.

God will deliver whom He will from this fire (*i. e.*, heat), which is here and which hath no compassion."² Well may we believe that during the summer months the soldiers in the Beth-shan garrison often expressed sentiments similar to those contained in the last sentence!

HIERATIC INSCRIPTION

Egyptian scribes and craftsmen must also have been installed in the fort. We have actually found the handiwork of one of these scribes, for on a potsherd from the corridor west of the commandant's

¹ Cf. *Exodus*, v, 7-18.

² Erman, *op cit.*, p 204.

residence was written in black ink in the hieratic character the following part of a religious text: *Seby (?) en Per-Deshrut, i. e.*, "The Fiend in the House of the Ruddy Beings." The Fiend is of course the god Set or Sutekh and the Ruddy Beings are his associates. Among these associates were the hippopotamus, ass, pig, crocodile, serpent, etc. A model of a hippopotamus, coloured a bright red, came from the Early Seti level on the tell in 1926,¹ while a cult object surmounted with the head of a pig was found in the southern part of the temple of Amenophis III during the same year. In Chapter CLXXXII of *The Theban Recension of the Book of the Dead*, Set is actually referred to as the "Ruddy One". In Chapter XCVI the deceased says, "I have made Suti (*i. e.*, Set) to be satisfied by means of the spittle of the god Aker and the Ruddy Beings." Chapters CXLI and CXLVIII mention in connection with the Southern Rudder of Heaven the "Dweller in the Temple of the Ruddy Beings", which reminds us of the "House of the Ruddy Beings" on the Beth-shan potsherd. Many other references to "Ruddy Beings" in *The Book of the Dead* might be given but the above should suffice for the purposes of this article. In passing, it may be mentioned that the above-mentioned potsherd contains the first hieratic inscription brought to light at Beth-shan.

By analogy with a certain recently published collection of potsherds containing ink inscriptions cursing all rebels against Egyptian rule, dating from the Middle Empire (ca. 2000 B. C.), we see that the vessel containing the Beth-shan inscription was broken in pieces after the text was written in it, the idea being that just as the vessel was broken so would the fiends be destroyed.²

MODEL OF A CHARIOT

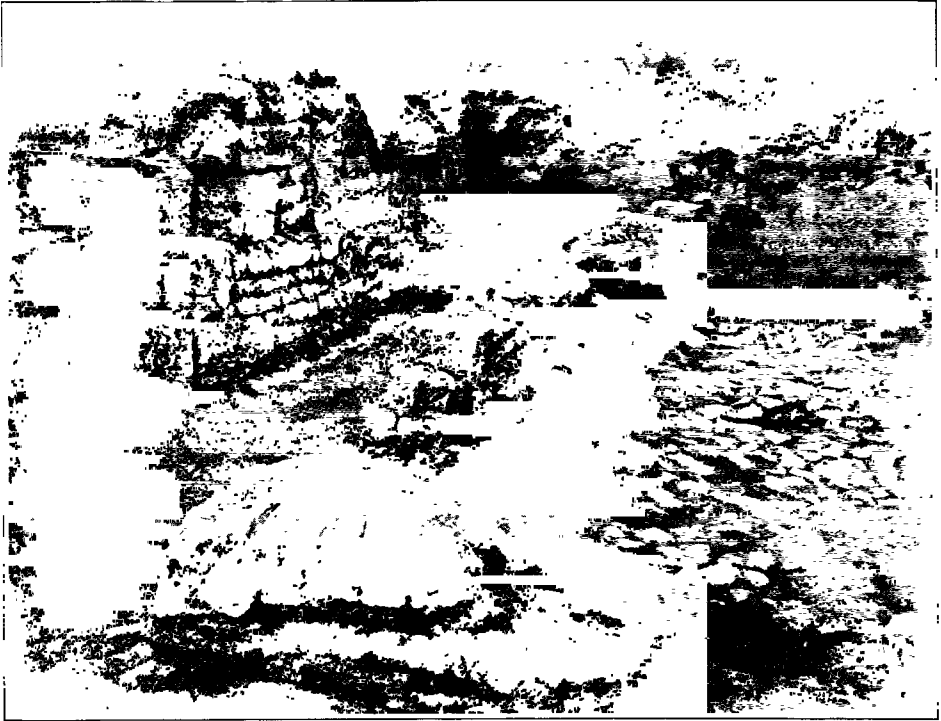
Although the objects found in the migdol were not numerous, yet some of them are of great interest, especially the fragment of a pottery model of a two-horsed chariot showing the horses, the pole, and the yokes. The trials of an Egyptian official driving a chariot in Palestine are referred to in the Anastasi papyrus: "Thy horse is gone and is speeding(?) over the slippery ground. The road stretches before it. It smashes thy chariot; . . . thy weapons fall to the ground and are buried in the sand."³ If the higher

¹ MUSEUM JOURNAL, March, 1927, p. 21.

² See Sethe, *Die Achtung feindlicher Fürsten, Völker und Dinge*, etc. (Abh. d. Preuss. Akad. d. Wiss., phil.-hist. Klasse, 1926, No. 5).

³ Erman, *op. cit.*, pp. 261, 262; Gardiner, *Egyptian Hieratic Texts*, part I, pp. 27-28.

officials had difficulties with their chariots, lesser charioteers had far greater ones, for the Egyptian schoolboy was exhorted: "Set thine heart on being a scribe, that thou mayest direct the whole earth. Come, let me tell thee of a miserable calling, that of the officer of chariotry. He is placed in the stable because of the father of his mother (*i. e.*, out of regard for his family), with five slaves; two men of them are given him as helpers. . . . When he hath obtained goodly horses, he is glad and exulteth . . . *but he knoweth*



Stable for ten chariot horses, found just inside the northern part of the main entrance to the Rameses II fort. Looking northwest.

not yet how it is with him! He expendeth his wealth which he hath from the father of his mother, that he may acquire a chariot. Its pole costeth three *deben* (273 grammes, probably of silver) and the chariot costeth five *deben* (455 grammes). . . . He casteth it (*i. e.*, the chariot) away in the thicket, and his feet are cut by the sandals(?), and his shirt is pierced with thorns. When one cometh to muster the troops(?), he is grievously tormented(?); he is beaten upon the ground, beaten with an hundred stripes."¹ According to the Koller papyrus, the equipment of an Egyptian war chariot bound for Syria

¹ Erman, *op. cit.*, pp. 195, 196.

consisted of a pair of horses together with their stablemen and grooms and asses for carrying the provender and bread, a quiver containing eighty arrows, a lance, a sword, a dagger, a whip furnished with lashes, a chariot-club, a "staff of the watch", a Hittite javelin, a rein-looser, well tested bows, and "all kinds of weapons of warfare". The metal weapons were "of bronze of six-fold alloy, graven with chiselling".¹ What now appears to us to be a stable for chariot horses was discovered in 1923 just inside the northern part of the main entrance to the Rameses II fort on the tell. This consists of a room divided into two parts by a wall of brick containing five upright slabs of basalt to which, no doubt, the horses were tied. Seeing that there are five uprights, we may perhaps assume that the stable contained ten horses, that is to say, five on each side of the wall. The floor, which is paved with undressed stones, was made to slope down from north to south in order that the drainage might be carried away.

OTHER FINDS IN THE MIGDOL

In addition to the model of the chariot, we found in the migdol the well modelled head of a small pottery figurine of a king (?) wearing the false beard and having attached to the back of his head what appears to be either part of the uræus or part of the lock of hair symbolic of youth, the former being the more probable as the face is evidently that of a man. This figurine is by far the best of its kind that we have yet unearthed, for the delicacy of its modelling is in striking contrast to the coarse modelling invariably seen in Canaanite portraits of human beings. Perhaps the most important and certainly the quaintest object from the migdol consists of a small jar in the form of a squatting, pot-bellied man, not unlike the Egyptian deities Bes and Ptah-Seker in appearance, with his hands in front of him holding the spout. Traces of a finger impression of the potter are visible on the top of the head. A jar resembling the above but in the form of a woman, came from the archaic Ishtar Temple in Assur (ca. 2700 B. C.), from which temple also came cylindrical cult objects and shrine-houses similar to those found at Beth-shan. Further, the face and arms represented on the Beth-shan pot are not unlike the faces and arms represented on the pottery anthropoid sarcophagi of the foreign mercenaries of Egypt found in the Beth-shan cemetery and also in Lower Egypt. Other finds in

¹ Erman, *op. cit.*, p. 211; Gardiner, *op. cit.*, pp. 37, 38.

the migdol consist of a green jasper amulet of a cat very well modelled (this was a foundation deposit); a lid of an alabaster eye-ointment pot decorated with an incised pattern; fragments of Canaanite open pottery lamps; part of a bronze bracelet; a bronze awl with a bone handle; a fragment of gold foil; clay models of votive offering cakes; stone querns and dishes; and a quantity of pottery vessels, including two so-called pilgrim-bottles, a beautiful two-handled amphora with palm tree and geometrical design (this is one of the finest vessels of its kind ever found at Beth-shan), bowls with two



Drawing of the head of a pottery figurine of a king(?) wearing the false beard. Migdol of Amenophis III.

loop-handles inside, a small jar with a projecting filter spout, a single-handled jar of buff ware almost egg-shaped, the magnificently decorated rim and shoulder of a large pot, and a cylindrical pot-stand. From the late intrusive débris at the western part of the migdol came a circular single-nozzled pottery lamp of the Hellenistic period, about the fourth or third century B. C.;¹ part of a coarse white marble Roman capital; and a cup (broken) of red polished Arretine ware bearing on its base the potter's name, IVLI, *i. e.*, "Julius".

¹ Cf. *Catalogue of Greek and Roman Lamps in the British Museum*, pl. XL, No. 43.

In concluding our remarks on the migdol we must specially mention an object of the very greatest importance which was found in that building and which is almost certainly contemporaneous with it. This is a small, flat, bronze figurine of a god wearing a conical cap. Both arms are uplifted and he holds an axe in his left hand and some other object, now broken away, in his right. That the missing object is the emblem of lightning would seem to be fairly certain, for the god has exactly the appearance of the Hittite storm deity, Teshub, who is generally depicted with both arms uplifted and bearing the axe and lightning emblem.¹ Teshub was probably identified with Mekal, the local storm and pestilence god. At the back of the figurine is a horizontal nail-like projection for fixing it to a pole or other object. In view of the assumption that the figurine most probably represents Teshub, it is interesting to recall the Hittite appearance of the door of the migdol;² also the beautiful bronze Hittite axehead found in the Amenophis III temple on the tell in 1926 and the Hittite seal with hieroglyphs discovered in the same level in 1927.³ At the time the migdol was built and in use a certain amount of Hittite influence was passing into Palestine; for, according to the el-Amarna tablets containing the official cuneiform correspondence between Amenophis III and Amenophis IV of Egypt and their governors in Western Asia, the Hittites were intriguing against Egypt in Syria and there were already Hittite chiefs in Palestine, some perhaps as mercenaries in the Egyptian army.



Bronze figurine, probably representing Teshub, the Hittite storm god. Migdol of Amenophis III.

THE COMMANDANT'S RESIDENCE

As will be seen from the plan of the migdol accompanying this article, the brick building which we suppose to have been the residence of the fort commandant adjoins the northern side of the

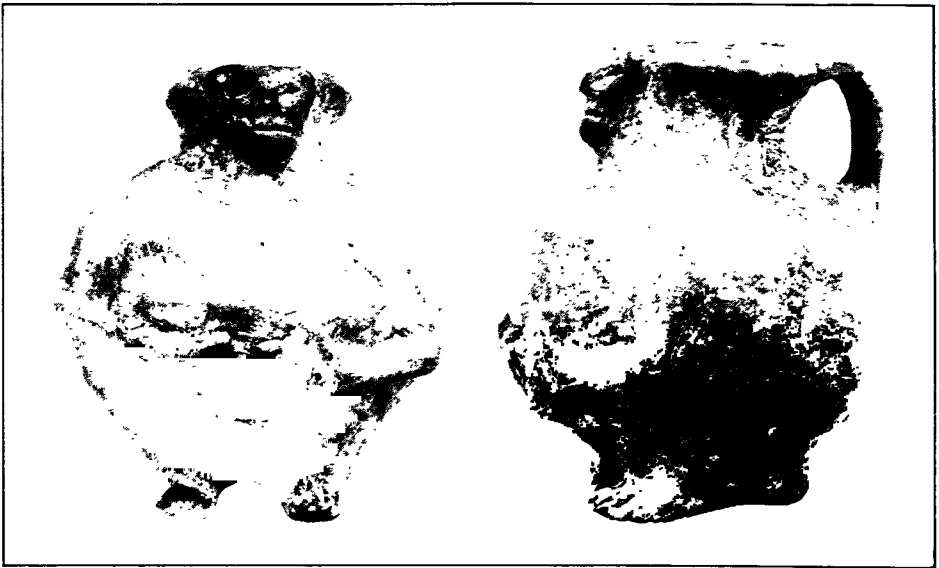
¹ Garstang, *The Land of the Hittites*, pl. LXXVII, fig. 1; Weber, *L'Arte degli Ittiti*, pls. 2, 3; and Ward, *Seal Cylinders of Western Asia*, chap. XLVIII.

² See the reference in footnote 1, p. 54, to the Carchemish gateway.

³ Figured in *THE MUSEUM JOURNAL*, March, 1927, p. 17, and June, 1928, p. 160, respectively. See also the Hittite dagger found in our Thothmes III temple in 1927 and shown in the *Quarterly Statement*, P. E. F., April, 1928, pl. II.

migdol. This building consists of a rectangular structure with a corridor and three rooms inside it; there is a kitchen on its northern, and an open courtyard containing an enormous granary on its western side. Excluding the outside kitchen and the small wall strengthened by stones projecting to the north of the silo, the residence measures about 40 feet each way and is therefore much smaller than the migdol. Like the latter structure, however, the residence is extremely well built upon a foundation of stones, but its walls are of course not so thick.

Although there are no traces of doors in the residence as it now stands, it seems almost certain that the only outer entrance



Jar in the form of a squatting man holding the spout with both hands. Migdol of Amenophis III.

was at the west end of the corridor at the south of the building, that is to say, in the southeastern corner of the courtyard, behind the silo. Walking eastwards along the corridor one would have found in ancient days a door on the left leading into a room which now appears to us to be a lavatory, the lavatory no doubt being based on the bucket system as at el-Amarna in Egypt. The receptacle for the bucket is at the north end of a narrow brick platform containing a small wall on both sides of it. This is the first time we have discovered a place of this description in Beth-shan. Walking a few steps further eastwards along the corridor one would have come to a second door on the left and a small door straight ahead,

the latter leading into a small cupboard and the former into what was evidently the living and reception room. Passing through a door in the north wall of the living room we should have entered a room which was probably used as sleeping-quarters. There is now a small transverse slot in the eastern wall of this supposed bedroom, but whether this was meant to serve as part of a window or whether it was made during the destruction of the building, it is impossible to say.

Among the objects found in the residence itself may be mentioned a quantity of pottery vessels including a pilgrim-bottle, dishes, bowls, and jars; a clenched hand, four and a half inches in



Green jasper amulet of a cat, from the foundations of the migdol of Amenophis III.

length, from a large pottery statue; weights, and a colour-grinding slab, all of basalt; an ivory inlay; a gold bead; a very nice mace-head of alabaster containing a piece of lead in its bore; a well made steatite scarab showing a lioness, a lion, and a bull's head, all above a crocodile; and a faience scarab bearing the words *Amen sankh*, *i. e.*, "Amen sustains".

THE KITCHEN

The kitchen attached to the residence is on the north side of the building and seems to have had its entrance at the west. We found in it the remains of a small circular pottery oven containing ashes; also a jar and bowls, a model of a chariot wheel, models of votive offering cakes, the base of a cylindrical cult object of some

kind, the lower part of an Ashtoreth figurine, and a fragment of a very interesting model of a humped bull, all of pottery. The ordinary species of bull as well as the humped species was one of the emblems of the Syrian storm god Adad, whose thunder was represented by the bellows of the bull.¹ Further, as we have seen, the bull was connected with Mekal, the local god of Beth-shan, who was really a kind of storm god. In addition to the above objects must be mentioned a very nice little flower-shaped glass pendant and a basalt plumb-bob.

THE COURTYARD AND SILO

The courtyard, which is to the west of the residence, contains an enormous cylinder-shaped silo, built of bricks laid stretcher by stretcher. Its internal diameter from north to south is 13 feet and from east to west, 12 feet 6 inches, while its depth is 11 feet 5 inches; the sides are 10 inches thick. The floor of the silo is of bricks resting upon undressed basalt stones; there are also stones below the circular wall itself and around most of the outside of the underground part of the structure. The present capacity of the silo is 9,270 modern gallons or 8,350 ancient Egyptian gallons (*heqat*). Although most of the silo as we see it now is underground,² yet there must have been a considerable part of it (broken away by the builders of the Seti I level) above the ground, which part, judging from the old Egyptian illustrations of silos, was dome-shaped in appearance with a small door in its top for pouring in the grain. Most of the Egyptian silos, however, seem to have been wholly above ground and to have had, in addition to the door in the dome, another door near the base for removing the grain. A very good pottery plumb-bob and a few pieces of pottery, some of which had a white flour-like substance on them, came from the silo. Doubtless, owing to the abundance of water, the valley in which Beth-shan is situated always had excellent harvests. We know, for example, that when Thothmes III, who died thirty-six years before Amenophis III came to the throne, captured Megiddo in the same valley near Beth-shan, he garnered a great quantity of grain.³

In the courtyard itself were found a small bronze dagger with curved blade and studs for the wooden handle, a very highly polished

¹ Ward, *op. cit.*, pp. 172, 380. Examples of the humped bull have also been found by Petrie at Gerar, in south Palestine. See *Quarterly Statement*, P. E. F., October, 1928, pp. 213, 214.

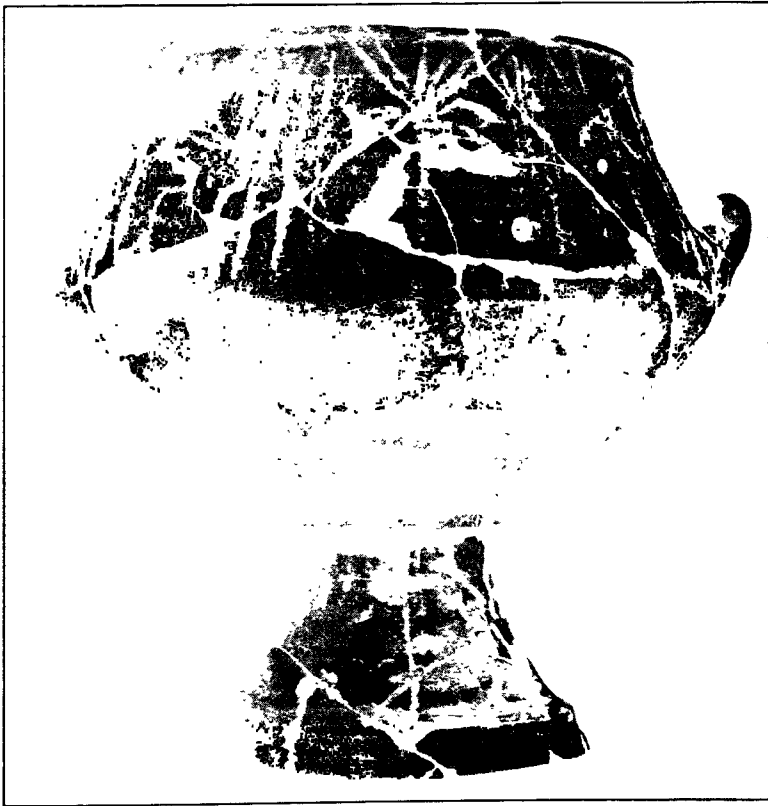
² Cf. *Jeremiah*, xli, 8, for a Biblical reference to underground stores of grain, etc.

³ Breasted, *Ancient Records*, ii, pp. 188, 189.

flint, lids of alabaster eye-ointment pots, beads, model votive offering cakes of clay; also bowls with two loop-handles inside, the head of a crudely shaped Ashtoreth figurine with large ears, part of a four-handled cylindrical cult object, and a fragment of another cylindrical cult object with a circular hole in its side, all of pottery.

ROOMS EAST OF THE MIGDOL

Just to the east of the migdol and between that building and the southern part of the Amenophis III temple, we discovered about



Amphora with two handles, decorated with palm tree and geometrical designs. Migdol of Amenophis III.

eleven rooms which, judging by their contents, were for the most part storerooms belonging to the temple. The most important object found in them is perhaps an opaque glass scarab showing the figure of a god wearing a conical crown with a pennant attached to the top of it and holding a sceptre in his left hand; he is, no doubt, Mekal, the god of Beth-shan. Other small objects consist of beads, bead spreaders, amulets, all of faience; a bronze pendant

having the figure of a hawk on one side and the figure of a lion with two plumes on his head on the other; ivory inlay pieces; a piece of gold foil; heads of models of three pottery geese; a limestone figurine of a monkey playing a pipe; and a limestone whorl having incised on it a sign like a capital M with a perpendicular stroke through its centre. The pottery objects comprise fragments of Cypriote milk-bowls, a good goblet, jars, bowls, and a wheel from the model of a chariot. There were also discovered in some of the rooms fragments of four cylindrical cult objects, one with a circular hole in it; a plaque with part of a serpent modelled on it in high relief; a serpent figurine having a bowl attached to it for the milk which the serpent was supposed to supply; a nude figurine of Ashtoreth with both hands supporting her breasts (apparently once part of a vessel); and the trunk portion of another Ashtoreth(?) figurine. All these last mentioned objects are of pottery.

NO. VI CITY-LEVEL. SETI I: 1313-1292 B. C.

Only a few rooms of the Seti I level have been excavated this season; they appear to consist mainly of storehouses. One of them, however, situated immediately to the west of the temple area, had three basalt column bases in it, one base being in the centre of the room and the others covered up by the bricks of the southern wall of the room. The exact significance of these bases is not yet certain but perhaps they originally formed part of a small temporary shrine. When the shrine was no longer required it was destroyed, two of the bases being covered up by a wall. Under the western base we found a piece of gold foil and under the eastern, a fragment of an Ashtoreth figurine. The third base was left in the middle of the room and was perhaps used as a slab for making dough, etc. Near this base was found the lower part of a primitive cornmill formed out of a hollowed piece of basalt; below the base itself was the tooth of an ass. The corn was placed in the lower part of the mill and made into flour by means of a long basalt crusher. A circular hole in the débris indicated where a fourth base was placed. In the northern part of the Seti area just excavated it was found that the Seti walls had been entirely destroyed by the foundations of the walls of the Rameses II level, which, in fact, went down to the level of Amenophis III. In the upper portion of this part of the Amenophis III level were discovered two very interesting objects, one of

them being an ingot of heavy metal something like lead in appearance. A piece of lead came from the tomb of Tut-ankh-Amen, while the yellow colour of a piece of Egyptian glass of the XIXth Dynasty was found by Mr. Lucas to be due to its containing a compound of antimony and lead.¹ Lead has also been found in Predynastic graves in Egypt.² Further, the metal was part of the booty captured in Syria by Thothmes III and presented by him to the god Amen.³ Its old Egyptian name was *dehti*. The other object referred to is a filter of some kind with the head of a goose attached to it. This is entirely unknown elsewhere and may have formed part of a temple object, perhaps a kind of movable filter-stopper for a jar.

The objects unearthed in the Seti I rooms are quite varied and many of them must have originally belonged to the temple in that level. Among the cult objects are fragments of a few cylindrical pottery stands with circular holes in their sides and the fragment of another similar stand with a triangular hole in it. The base portion of a serpent figurine in uræus form and parts of two *kernoi* or hollow rings with vases on them, all of pottery, are particularly interesting; the kernoi are of course Cypriote in origin. A small crude head of pottery representing a deity evidently comes from some shrine-house similar to those found in the temples in the level of Rameses II in 1925.

Among the other important objects from the Seti level are the following: *Pottery*: A quantity of vessels and objects of various kinds including well decorated Cypriote pilgrim-bottles; a bowl with two loop-handles inside; a hub and the outer portion of a wheel from a pottery model of a chariot; a large eight-handled bowl; a beautifully decorated pot with three loop-handles on its



Movable pottery filter-stopper (?) having the head of a goose. Amenophis III level.

¹ Carter, *The Tomb of Tut-ankh-Amen*, vol. ii, pp. 171, 175.

² Lucas, *Ancient Egyptian Materials*, p. 102.

³ Breasted, *op cit.*, vol. ii, p. 223. See also vol. v, p. 140, for other references to lead in ancient Egypt.

shoulder; a pot containing a quantity of corn blackened by age; and part of a small pottery tray decorated in red with a palm tree and the Cretan double axe. This tray is particularly interesting and the tree on it may be compared with the palm tree on the limestone Cretan amulet mentioned on page 43 as having been found in the Thothmes III level.

The chariot wheel recalls one of the reasons why the Israelites failed to capture Beth-shan: "And the children of Joseph said, The hill is not enough for us: and all the Canaanites that dwell in the land of the valley have chariots of iron, both they who are of Beth-shean and her towns, and they who are of the valley of Jezreel."¹

A filter-stopper from this level, with its top divided into two compartments, each compartment having three small channels leading downwards from it, represents a type of object hitherto unknown in our excavations. The stopper doubtless served as a "mixer" for two different liquids which were poured simultaneously, each into its own compartment, after the stopper had been fixed into the neck of a jar. A Cretan filter-stopper, consisting of a perforated bulb with a broad collar to fit the rim of a jar, was found at Harageh in Egypt.²

Bronze: A few arrowheads; and the small model of a terrier-like dog carrying a piece of bread (?) in its mouth and having something attached to its back. *Bones, etc.:* Gazelles' horns (the gazelle was sacred to Ashtoreth) and the complete upper jaw of an ass. Two of the incisor teeth, of which there are eight in all, were just beginning to grow out of the jaw. The ass was of course associated with Set, the god of storms, etc. *Limestone:* Three fragments of inscribed Egyptian lintels were found; one of them having traces of a design in high relief on it, one with part of a standing human figure, and one with part of a perpendicular line of hieroglyphs reading: ". . . [fanbearer] at the right hand [of the king], the chief of the bowmen. . . ." All these lintels belonged originally to the monuments set up in the southern temple of Rameses II by the fort commandant, Rameses-Wesr-Khepesh. The above titles are those of his father Thothmes.³ Another limestone fragment from the same temple was found this year in the Rameses II level. On it is

¹ *Joshua*, XVII, 16.

² Evans, *op. cit.*, vol. II, part I, p. 212, fig. 119 (No. f I).

³ MUSEUM JOURNAL, December, 1927, pp. 439-440.

depicted part of a standing man with his right arm uplifted. He wears an ornamented collar. *Various*: Under this heading may be classified beads and some amulets, including an amulet of the goddess Sekhmet and one of the god Bes; an alabaster *kohl*-pot lid; and two steatite scarabs. One of the scarabs contains two cartouches bearing the throne name of Thothmes III (*Men-kheper-Ra*), with three *ankh* signs dividing them. The other scarab shows the figure of an Egyptian king wearing a composite crown on his head and holding a scimitar in his right hand and the hair of a kneeling captive in his left. Before the king is the *Wesr* sign and behind him the *Maat* sign, which form part of the throne name of Rameses II (*Wesr-Maat-Ra*). This scarab is of course an intrusive one from the level above. Two heads from small models of geese, one of ivory and one of alabaster, recall the head of a similar bird represented on the peculiar filter found in the upper portion of the Amenophis III level. The goose, to the Egyptians and no doubt to many of the Canaanites under their influence, was the emblem of Amen-Ra, the sun god.¹ From the Seti I level came later on in the season some interesting finds including portions of three cylindrical cult objects, one with a circular hole in it; part of a *kernos* or ring-stand with two vases on it (originally five); a bull's head from another *kernos*; and the base of an Ashtoreth figurine; all of pottery. There were also model offering cakes of clay, a brick with impressions of reeds on it, an Egyptian cup of green glazed faience with decorations in black, beads, arrowheads and earrings of bronze, and the model (?) of a small axehead with traces of its wooden handle still adhering to it.

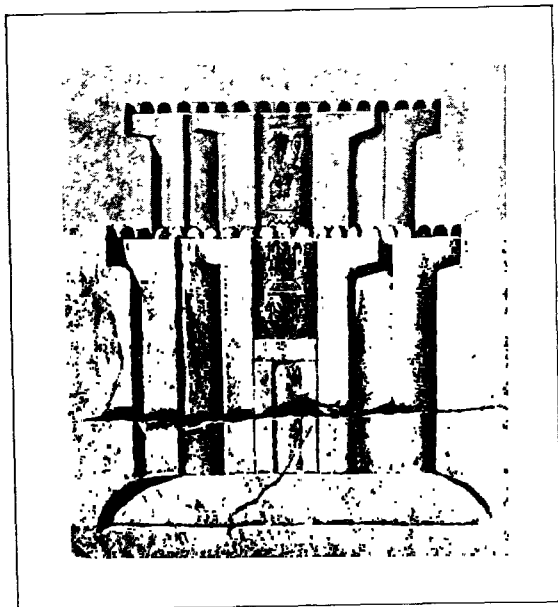
NO. V CITY-LEVEL. RAMESES II: 1292-1225 B. C.

After the work in the Seti I level was completed the labourers were transferred to the western part of the fort of Rameses II, where they commenced to clear away the débris from around the main gate of the fort and also the Hellenistic and Roman débris which had intruded into this level at the time of the building and occupation of the great Hellenistic-Roman temple the foundations of which had cut into the walls of the rooms of the time of Rameses II.

The northern part of the Rameses II gate had been partially cleared in 1923 and our present excavations have revealed the fact

¹ See my note on the goose on Canaanite objects in the *Quarterly Statement*, P. E. F., April, 1928, p. 110.

that there were two solid brick towers on either side of the entrance, thus showing the correctness of the old Egyptian illustrations of Canaanite forts.¹ The west gate of the Beth-shan fort of Rameses II is shown in the plan on page 87. Since this plan was made, traces of the southern part of the gateway, restored on the plan, have come to light and it is quite evident that the gate was large enough to permit of chariots being driven through it. The wider part of the inside of the gate is 10 feet 11 inches, or about 6 Egyptian cubits, and the narrower part 7 feet 11 inches, or about $4\frac{1}{2}$ Egyptian cubits. The gate towers are now only about seven feet in height,



Ancient Egyptian representation of a Canaanite fort of Seti I showing the double line of fortification walls and the gateway with towers.

their upper parts having been removed in ancient times. During a siege the tops of the towers were manned by archers who assisted in the defence of the gate. Behind the towers is the outer west wall of the fort, which is supported by an inner wall; the walls are separated by a narrow corridor. The Canaanite citadel of Jericho had double fortification walls and so had the Hittite citadels of Sinjirli and Boghazkeui.

Among the objects found in the Rameses II area which date from the time of that king to a few centuries later

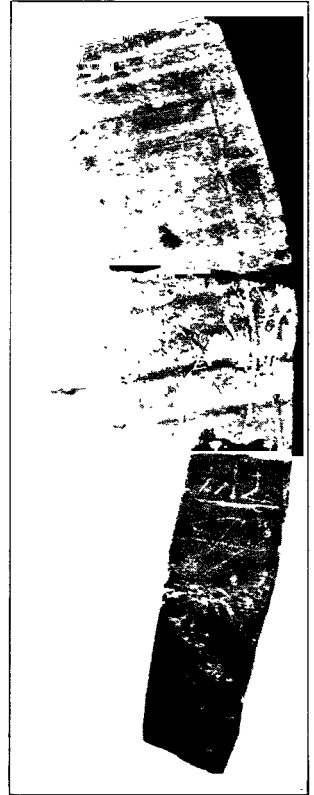
must be mentioned three bricks having respectively the impression of the toes of the left foot of a man, the impressions of the paws of a dog, and an incised anchor-like sign; an iron arrowhead; an alabaster circular seal with a wavy-line impression; part of a Cypriote model of a pig or bull; a broken Ashtoreth figurine with two anklets on each leg; a Canaanite lamp; the head portion of a small pottery model of a hippopotamus—the emblem of Set; a handle of a Cypriote milk-bowl; a magnificent Cypriote oinochoe with concentric circle designs in black; and a roughly cylindrical portable incense altar of basalt with seven flutes or grooves in its sides. A “Græco-Phoenician”

¹ Cf. Maspero, *op. cit.*, p. 127.

oinochoe with a pattern similar to the above but with a handle and a flat base, is shown in *A Catalogue of Vases in the British Museum*, vol. i, part II, p. 185, fig. 321. The altar is really a debased form of the rectangular panelled basalt altar found in the temple of Thothmes III in 1927.¹

Another interesting find was a piece of pottery of the Iron Age with two sets of characters incised on it; this is illustrated in the present article. The characters have not yet been identified, but Dr. Legrain suggests they are Aramaic. A limestone fragment, evidently of the time of Rameses II, from a Byzantine foundation trench sunk in the southern part of the area has the head of a cow scratched on it and also various lines, etc.; this looks like the work of a child.

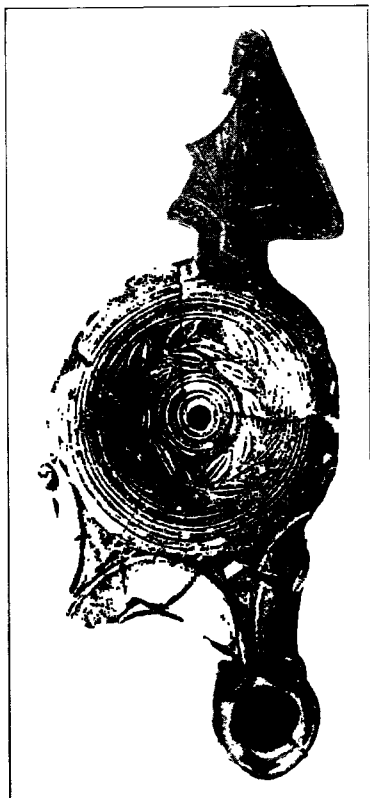
The Roman objects in the area were all discovered in the western part of the Hellenistic-Roman temple where there had been building operations in connection with baths, etc., in Roman times. Among all these objects were two very fine bronze strigils, implements which were employed for scraping off the moisture thrown out upon the surface of the skin by the heat of the vapour bath or by the violence of the gymnastic exercises. About six nozzles of Roman lamps all showing traces of burning, the upper part of a Roman lamp with a dolphin and an anchor in relief on it, and a magnificent Roman lamp dating from between 100 B. C. and 100 A. D., are particularly interesting as showing the types of lamps existing at Bethshan in later times. The last mentioned lamp had two nozzles, one of which is now missing, and an upright triangular piece with a handle below. On the upright piece is figured the acanthus. Round the filling-hole in the centre is a wreath. There are elaborate volutes between the nozzles. The acanthus is red in colour while the rest of the lamp is of a lightish yellow. On the base of the lamp is



Fragment of pottery of the Iron Age, found in the Rameses II level. This has incised on it two groups of alphabetical characters, perhaps Aramaic.

¹ MUSEUM JOURNAL, June, 1928, p. 151.

the name SELMIS. Another object bearing an inscription is the base of a Roman bowl of dark red glazed Arretine ware, on the inner

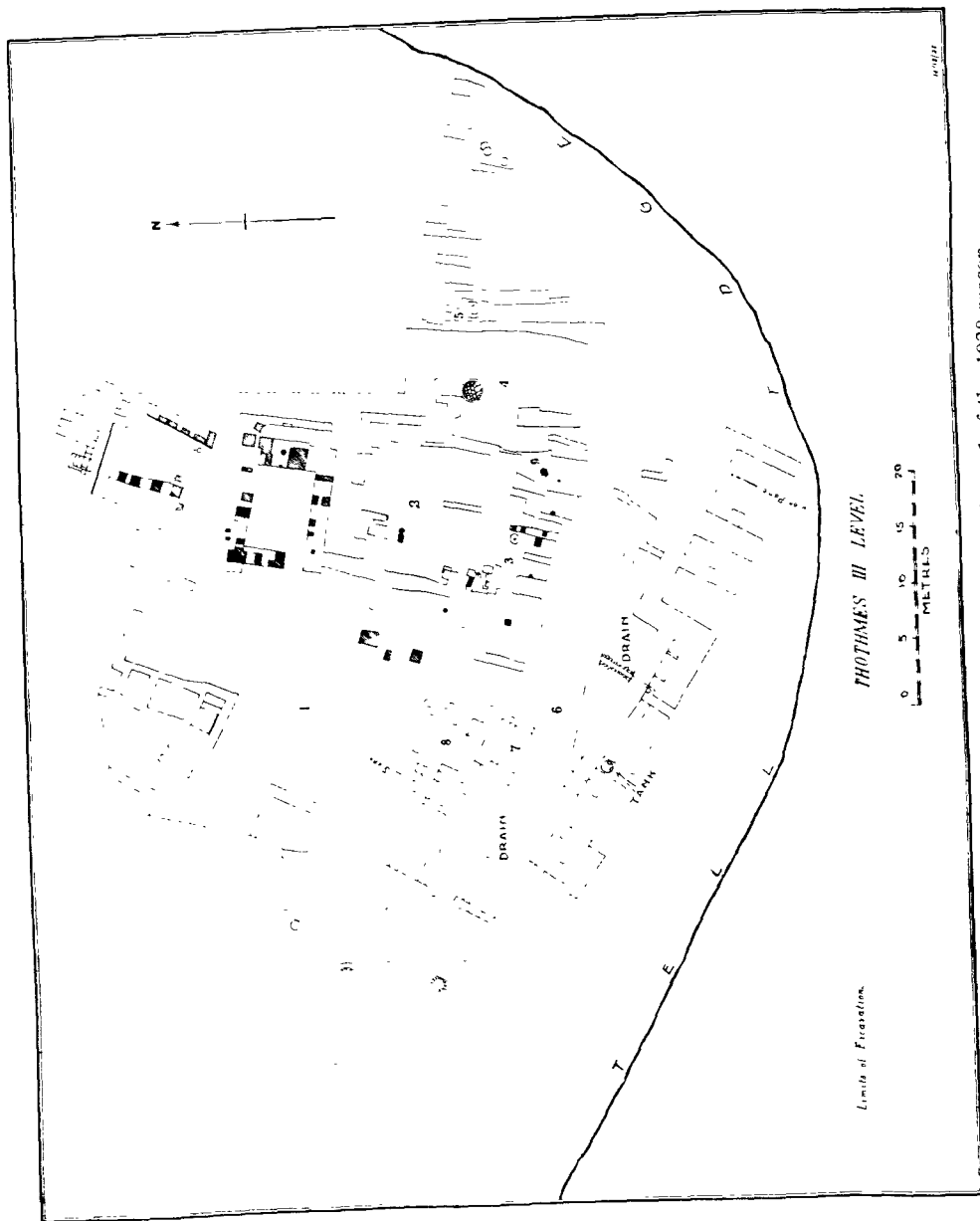


Roman lamp of a date between 100 B. C. and 100 A. D., found in the debris at the western part of the great Hellenistic-Roman temple on the tell. On the base is the name SELMIS.

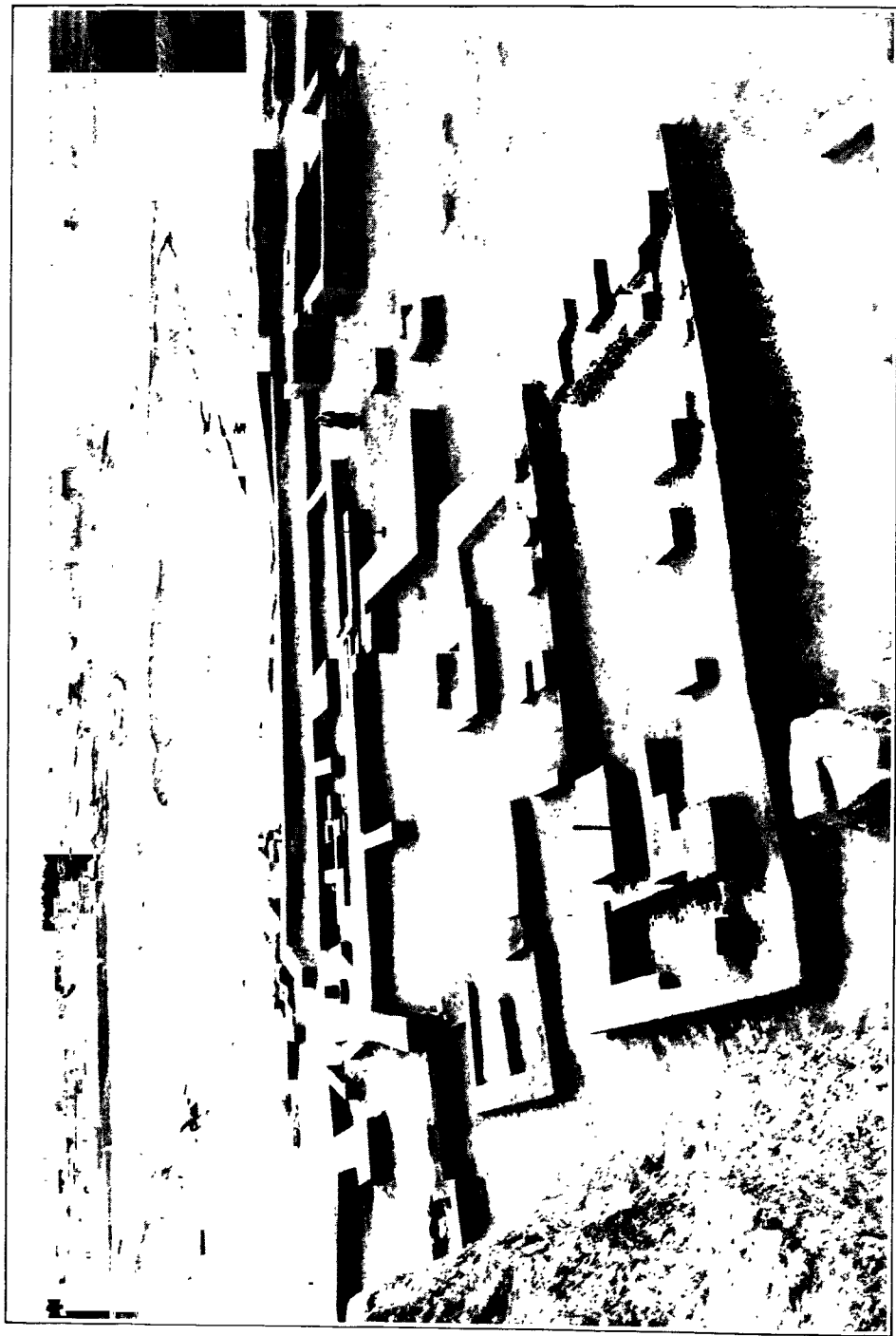
side of which is a stamp consisting of the potter's name, CAMVRI, *i. e.*, C. AMURIUS, in a human foot. The foot stamp seems to belong only to the time of the Empire. Finally, in connection with the later intrusive objects found in the Ramesses II area must be mentioned a two-handled Byzantine jar of whitish ware, slightly ribbed, with its rim partially squeezed in before burning. On its shoulder is written in black ink a group of signs in the cursive Greek character; these signs apparently give the name of the pot itself, and are very difficult to decipher as the ink has faded.

Every year's work at Beth-shan brings forth fresh surprises, for it can be said truly that there has been no season on the site that has not furnished much new information of all kinds—information which is slowly but surely enabling us to withdraw from the mists of antiquity a good deal of the ancient history of the Land of Canaan. Little by little, also, as a result of our excavations, we are beginning to understand better the old religions of the country in which, at

Beth-shan, Mekal, Nergal, Resheph, and Ashtoreth in her many forms, all played so large a part.



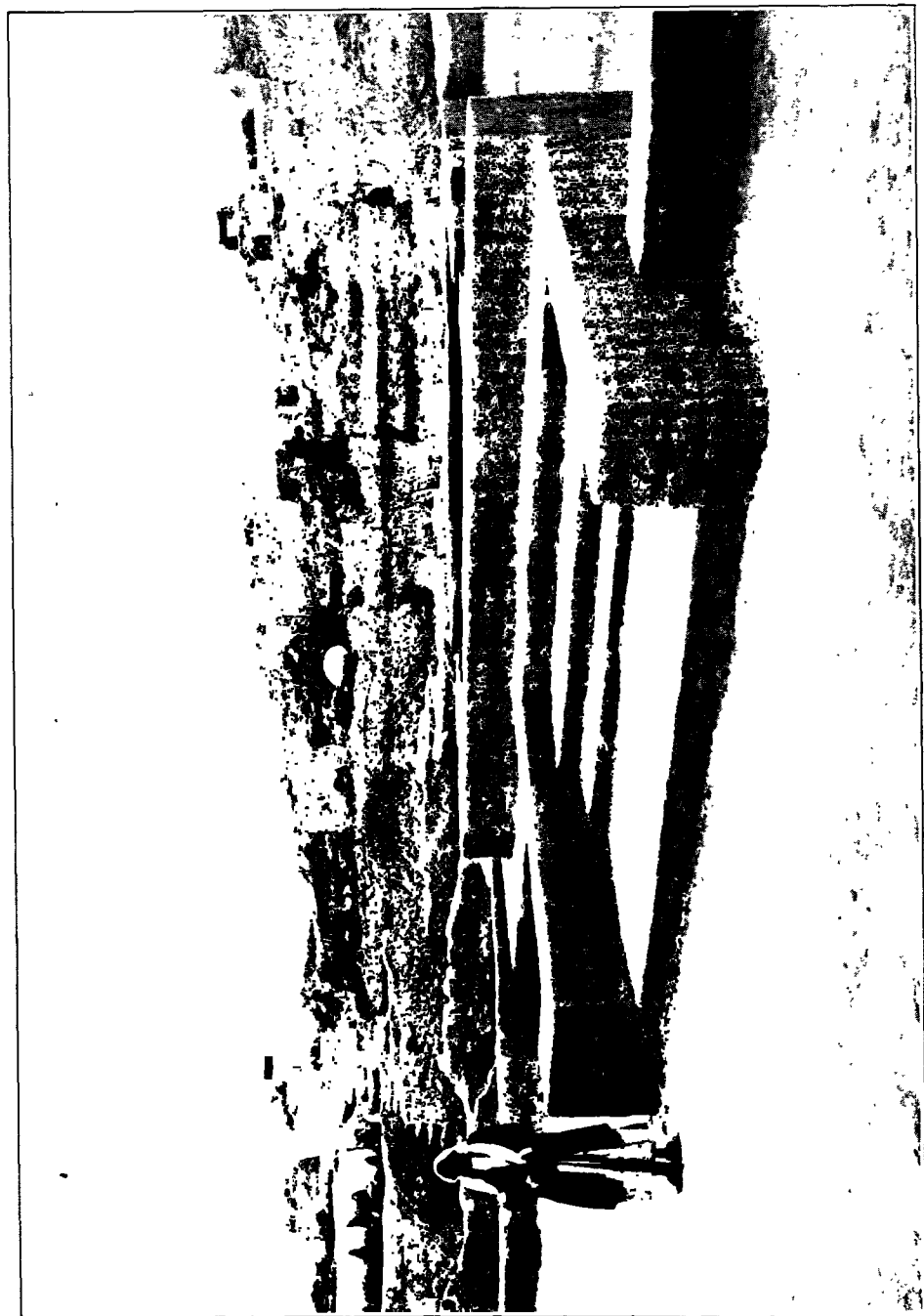
Map of Thothmes III level as it appears at the end of the 1928 season.



The Mekal temple, Thiothmes III level, as restored by the excavators. In the background are the Roman theatre and the modern village of Beisan. Looking southwest.



The room of the temple guardian in the Mekal temple of Thothmes III, and the flight of steps leading from the courtyard to the southern corridor. Looking southeast.



The great stepped altar in the southern corridor of the Mekal temple of Thothmes III. Looking northwest.



The southern corridor in the Mekal temple of Thothmes III. On the left foreground is the great stepped altar, and in the background the mazzelbah or conical emblem of the deity. Looking east.



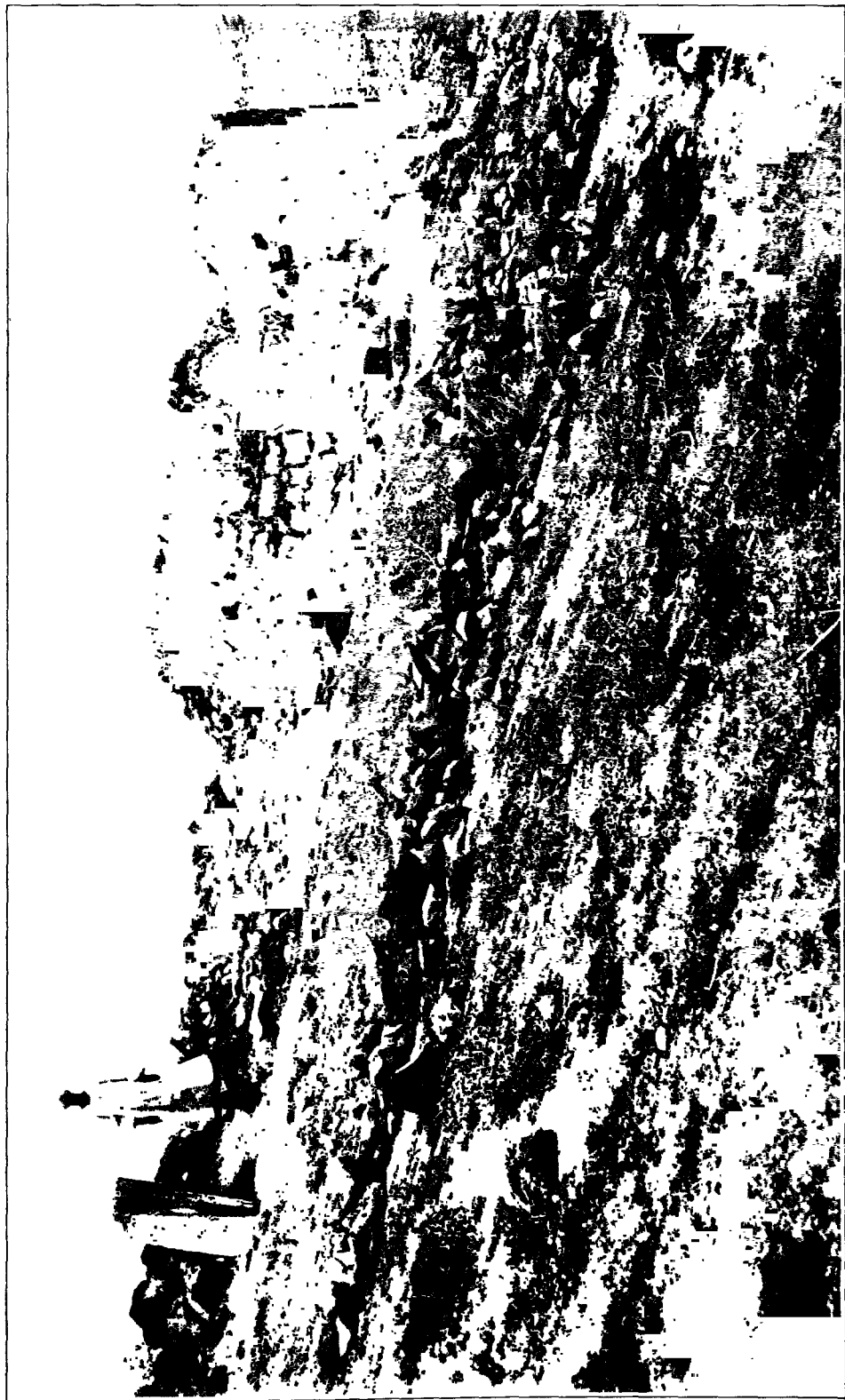
Mekal temple. The mazzehah or sacred conical stone emblematic of the deity, in the northern side of the eastern end of the great southern corridor. Note the libation bowl in front of the stone. Looking north.



The altar of sacrifice in the Mekal temple of Thothmes III. Looking south.

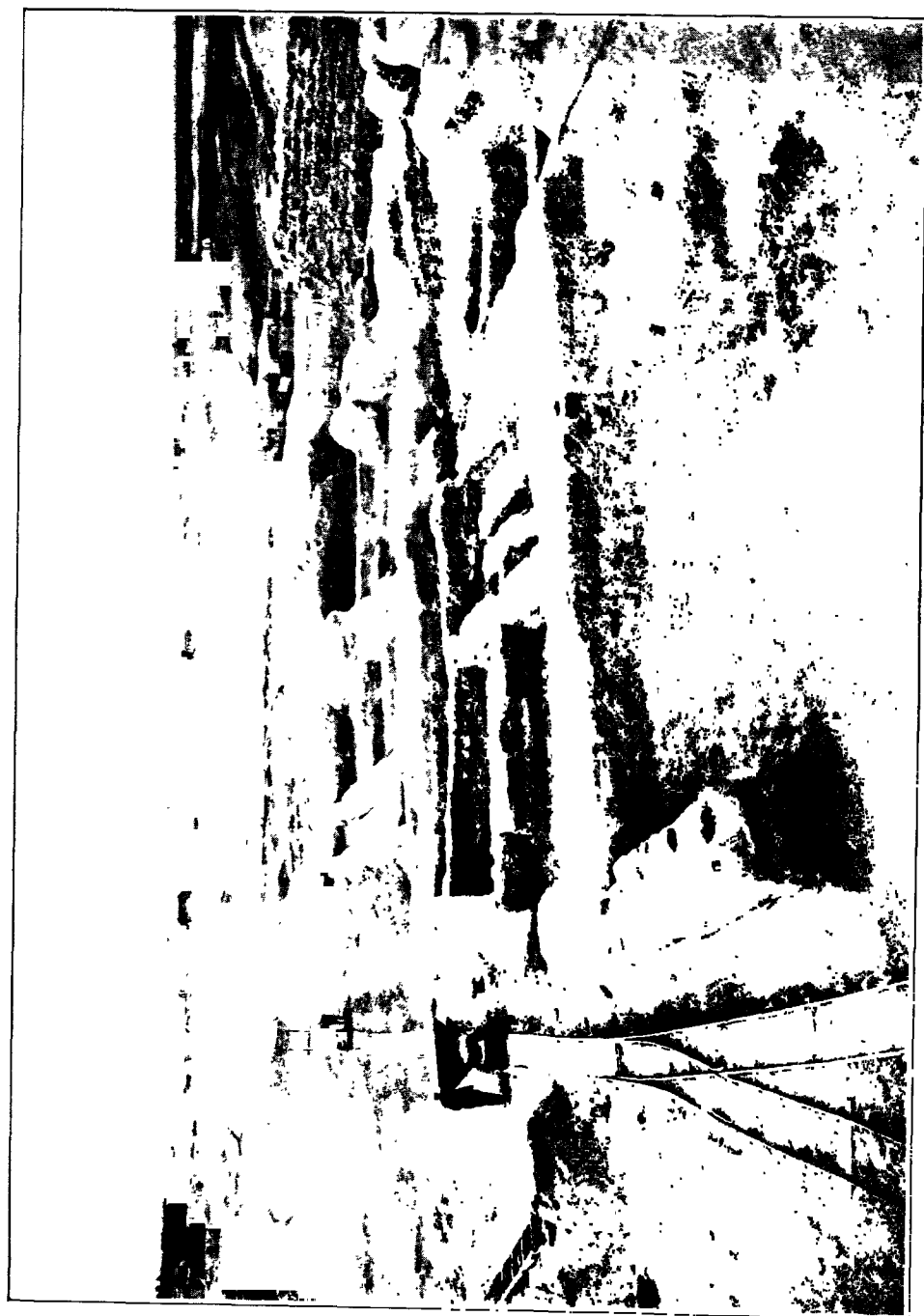


The two altars in the inner sanctuary of the Mokal temple of Thothmes III. Looking north.

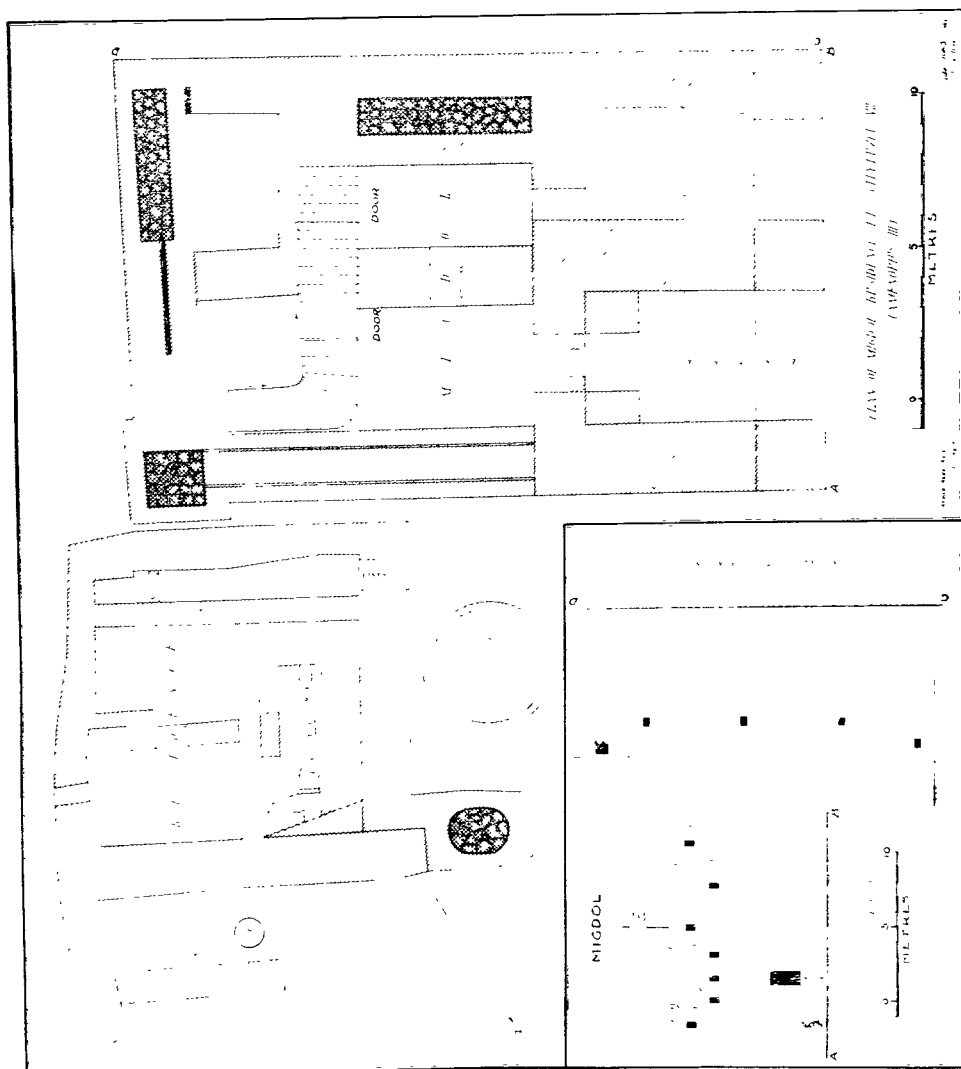


Tomb of Sheikh Halabi, a famous Moslem saint of Beisan. To the left is the stone column upon which the modern inhabitants of the village make sacrifices of small animals in fulfillment of vows. Compare the mazzelbah in the Meikal temple. Note the blood on the column. Looking northeast.

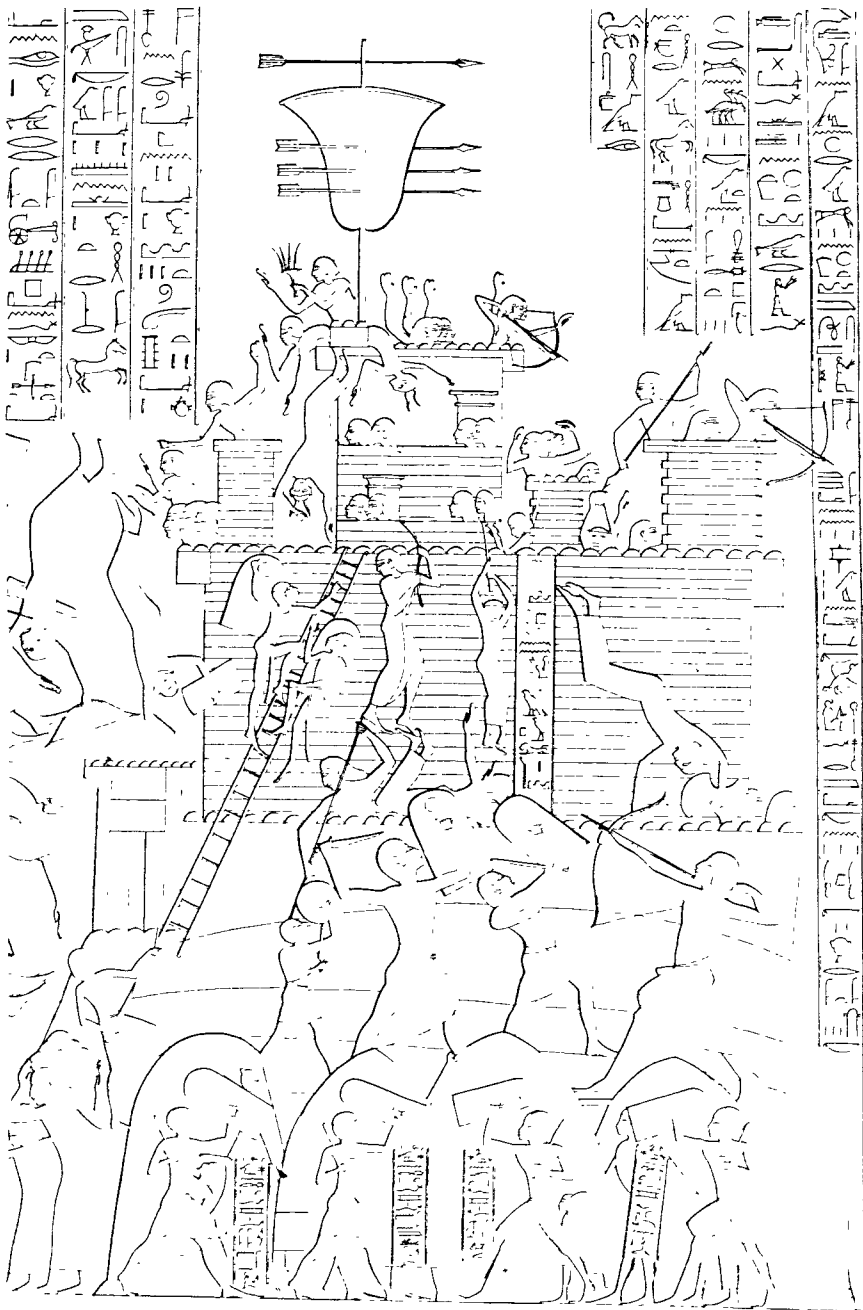
See pages 39, 80.



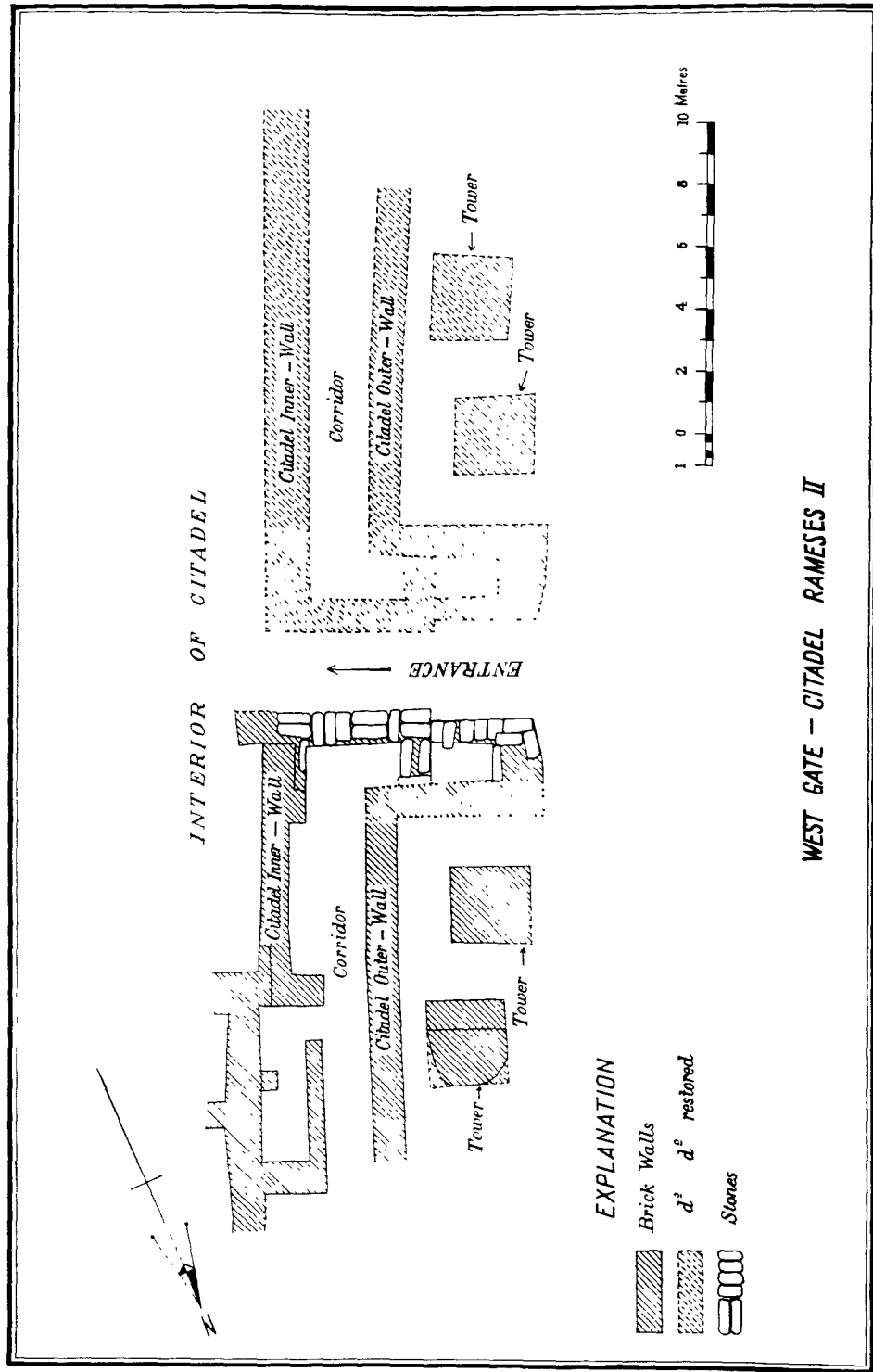
General view showing in the foreground the supposed residence of the commandant of the fort and the great silo; and in the background, the great migdol or fort tower. Amenophis III level. Looking southwest.



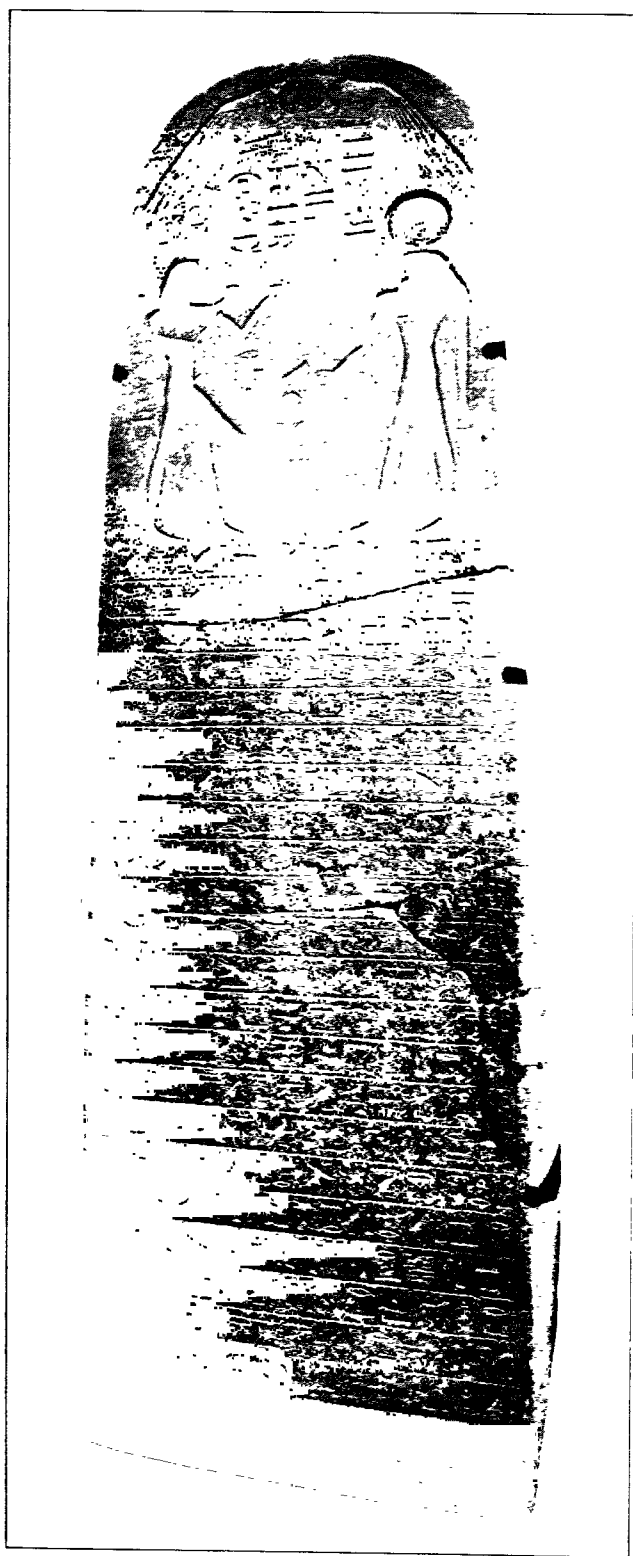
Plan of migdol, commandant's residence, and silo, Amenophis III level; and elevations of the western and southern walls of the migdol. Restorations are indicated by broken lines. Brick is indicated by oblique hatching and stone by cross hatching.



Egyptian representation of the North Syrian Hittite fort of Dapur, showing the standard. Compare the standard depicted on the cylinder seal of Rameses II found at Beth-shan and illustrated on page 55.



Plan of the west gate of the Beth-shan citadel of Ramesses II (1292-1225 B. C.) showing the double fortification walls and the two supporting towers on each side of the gate. Compare this plan with the representations of a Canaanite fort and a model of a fortified temple on pages 72, 53.






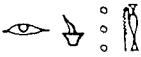
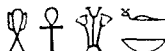
Stela of Seti I, found at Beth-shan. The fragments found since the previous publication of this stela are included here.

THE TWO ROYAL STELÆ OF BETH-SHAN

BY ALAN ROWE

IN the MUSEUM JOURNAL for December, 1923, there appeared the photographs of the two large basalt stelæ discovered that year in the Rameses II level on the Beth-shan tell, one of these stelæ being made by Seti I and the other by Rameses II. The former stela, which had some fragments missing from it when unearthed, is in the Palestine Museum, while the latter stela is in the UNIVERSITY MUSEUM. The missing fragments of the Seti monument came to light in 1925; there is a cast of this monument in the UNIVERSITY MUSEUM.

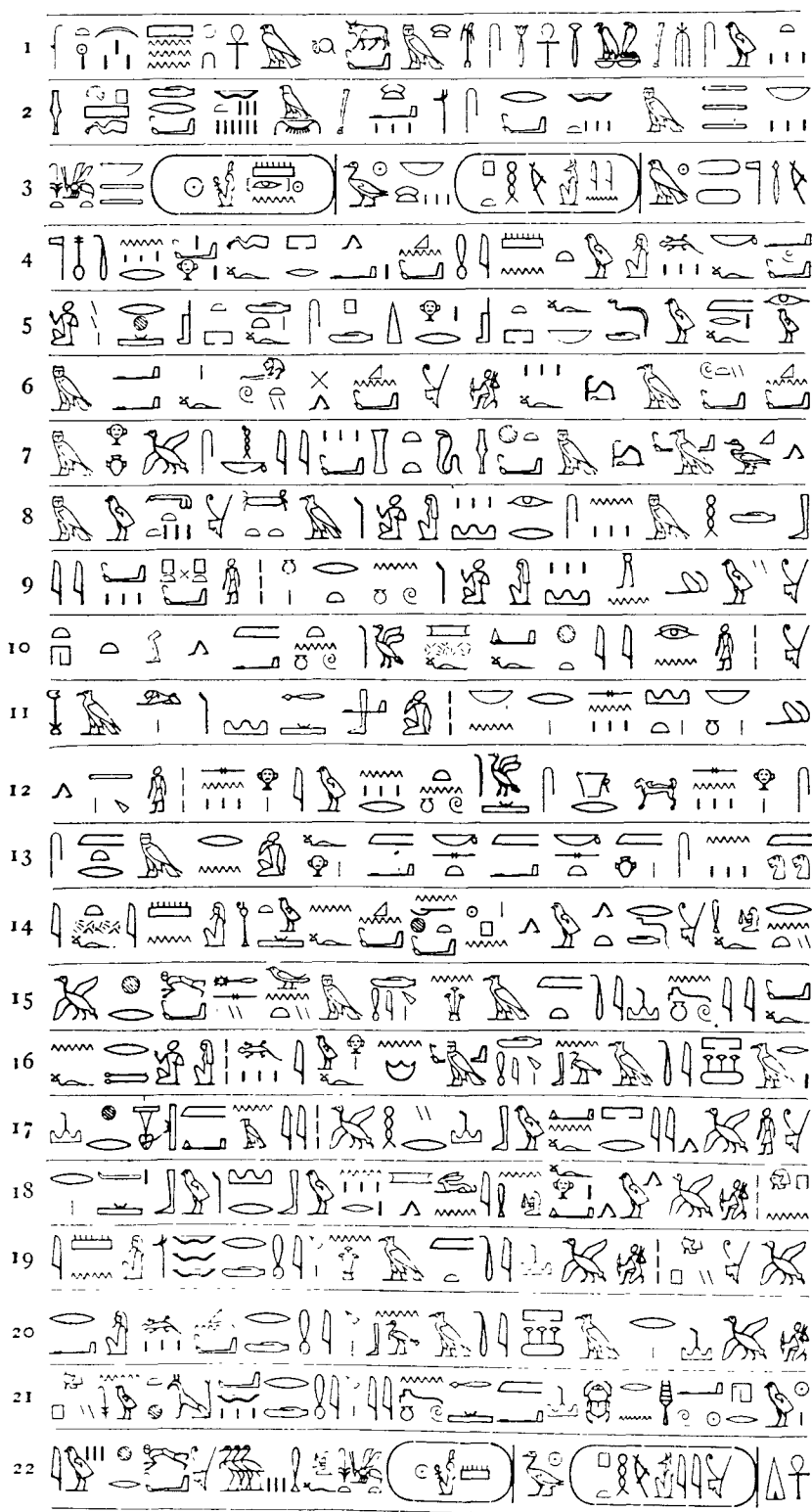
THE TOP OF THE SETI STELA

A	Below solar disk, etc. of Horus of Behudet	
B	Above the god Ra-Harmachis	
C	Above King Seti I.	
D	In front of the King	
E	Behind the King	

Across the top of the Seti stela, which is vaulted, is the solar disk with wings and uræi of the god Horus of Behudet (Edfu), below which is written: "Behudet, the great god, of variegated plumage, the lord of heaven."

Underneath are two figures, that on the right representing Rā-Harmachis. The god is hawk-headed, has the solar disk on his head, holds the *was* sceptre of happiness in his right hand, and the *ankh* symbol of life in his left hand. Over him is written: "Rā-Harmachis, the great god, the lord of heaven, grants all life to him (*i. e.*, the king.)"

Facing the god, and on the left side of the stela, is the other figure, which represents king Seti I himself. He wears a short tunic, and has the royal uræus on his head; in his left hand is a pot of incense, and in his right a libation pot, both of which he is presenting to Rā-Harmachis. The text in front of him states that he is "Making



Horizontal text on the stela of Seti I.

[offerings of] incense and libations." Seti has his throne name, etc., written above him: "The good god, the lord of the Two Lands (*i. e.*, Upper and Lower Egypt), 'Men-Maât-Râ', granted life like Râ." Behind the king are the words: "All protection and life are behind him", while between him and the god are a libation pot and a lotus resting on an altar stand.

THE HORIZONTAL LINES OF TEXT

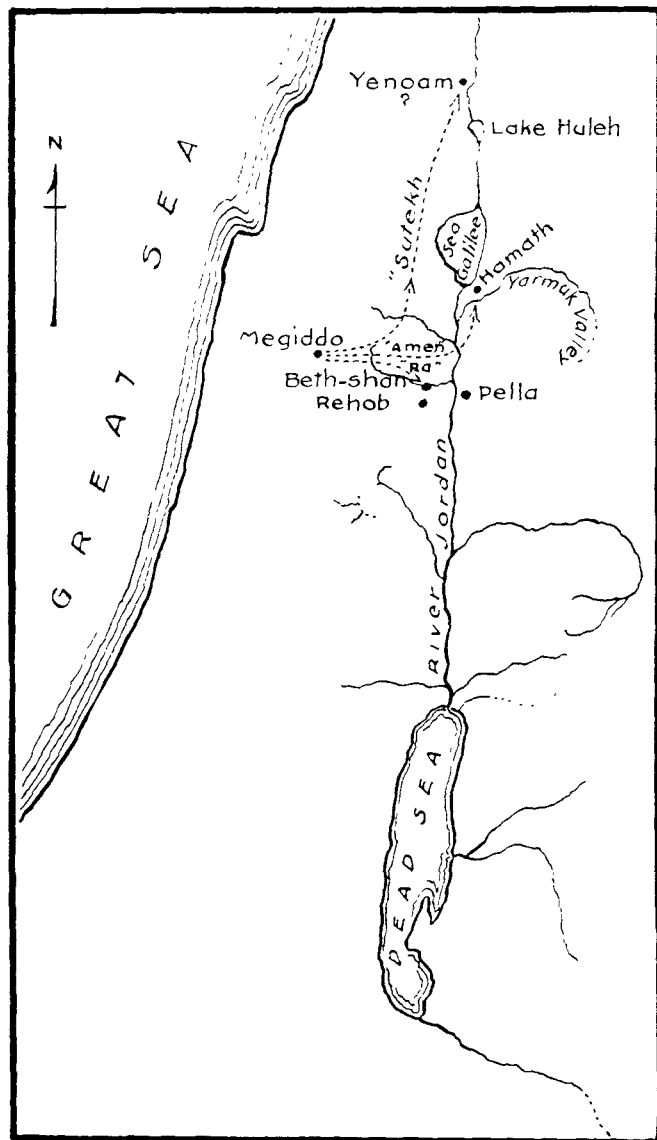
The twenty-two horizontal lines of text below the above scenes give, in the following order:

- (1) The date of the stela, which is "Year I, month III of summer, day X", *i. e.*, 1313 B. C.—Beginning of line 1.
- (2) The five "great names" of the royal titulary.—Lines 1–3.
- (3) A general description of the bravery and other qualities of the king.—Lines 4–13.
- (4) A detailed description of the driving back from Hamath and Pella, on the east side of the Jordan, of a league of foes who had been attacking Beth-shan and Rehob, on the west side of the river.—Lines 14–22.

The text states that a messenger came to inform Seti that the wretched chief of Hamath, a city at the entrance of the Yarmûk Valley, had collected to himself many people and had made an alliance with the people of Pella, a city opposite Beth-shan, on the east side of the Jordan. (At the time the messenger reached Seti, the king, who was in the course of reconquering Palestine, which had been lost to Egypt since the el-Amârna era, was probably journeying eastwards down the Valley of Esdraelon, and may indeed have been resting at Megiddo, an important town some little distance to the northwest of Beth-shan.) The messenger also stated that the chief was attacking Beth-shan and beleaguering Rehob, a city a little to the south of the former place (see map). Upon hearing this news Seti at once sent the first army of Âmen to Hamath, the first army of Râ to Beth-shan, and the first army of Sutekh to Yenoam, a city perhaps situated to the north of Lake Hûleh, and overthrew his enemies "in the space of a day".

This is one of the earliest mentions in the hieroglyphic records of the Egyptian army divisions. We next meet with them in the account of the battle of Rameses II with the Hittites, at Kadesh, on the River Orontes (where the Hittites had established themselves during the

el-Amârna era), in which battle another army, that of Ptaḥ, also took part. In the Kadesh battle the army of Rā was somewhat badly cut up. The Ptaḥ army probably remained with Seti at Megiddo, which may explain why it was not mentioned on the Beth-shan stela.



Sketch map showing places referred to in the stela of Seti I, etc.

Doubtless among all these troops there were many Mediterranean (Ægean-Anatolian) mercenaries, including the redoubtable Sherdenen, who must have formed the major part of the garrison left at Beth-shan by Seti. A few of the cult objects in the Beth-shan temples were perhaps introduced by these mercenaries, some of whose burials are fully described in the MUSEUM JOURNAL for March, 1927.

The translation of the horizontal text is as follows:

1. Year I, month III of summer, day X. Live the HORUS' 'Strong-bull-arising-in-Thebes, making-to-live-the-Two-Lands'; TWO LADIES 'Repeating-births,
2. wielder-of-the-scimitar, crusher-of-the-IX-Bows'; HORUS OF GOLD 'Repeating-risings, powerful-of-bows-in-all-lands';
3. KING OF THE SOUTH AND NORTH, LORD OF THE TWO LANDS 'Men-Maāt-Rā, āri-en-Rā'; SON OF THE SUN,

LORD OF APPEARANCES 'Seti-meri-en-Ptah'; beloved of Horus-of-the-Two-Horizons, the great god.

4. The good god,² valiant with his scimitar, a hero brave like Mentu,³ of many captures,
5. knowing the place of his hand, keen in all his places, speaking with his mouth, doing
6. with his hands, a leader brave of his soldiers, a fighter brave
7. in the midst of the warriors, a Bastet⁴ mighty in the battle, entering
8. into the dense masses of the Asiatics, making them into a holocaust,
9. treading down the chiefs of Retennu,⁵ compassing the end of
10. him who has transgressed his path. He causes to retreat [the chiefs of Kharu], and to cease⁶ the chiefs of
11. Kharu⁷ all the boastings of their mouths! All countries at the end of
12. the earth, their chiefs [say] 'Where are we going to?' They spend the night
13. making testification to his name—[saying] '*mekset, mekset*'⁸—in their hearts by reason of the strength of
14. his father Amen, who hath adjudged to him bravery and victory. On this day came one⁹ to speak to his majesty¹⁰ to the effect that¹¹
15. the wretched enemy who was in the city of Hamath¹² he had collected
16. to himself many people, was taking away the town of Beth-shan,
17. had made an alliance with those of Pella,¹³ and was not allowing to come forth the chief of
18. Rehob¹⁴ outside [his own city]. Then his majesty¹⁵ sent the first army of
19. Amen ('Powerful Bows'¹⁶) to the city of Hamath, the first army of
20. Ra ('Many Braves') to the city of Beth-shan, and the first
21. army of Sutekh ('Strong Bows') to the city of Yenoam,¹⁷ and it happened that in the space of a day
22. they were overthrown by the will of his majesty,¹⁸ the KING OF THE SOUTH AND NORTH, 'Men-Maāt-Ra', SON OF THE SUN, 'Seti-meri-en-Ptah', granted life.

THE TOP OF THE RAMESES STELA

Across the top of the Rameses stela, which is vaulted, are the solar disk, wings and uræi of Horus of Behudet, who is called "Behudet, the great god".

Underneath are two figures, that on the left representing the god Amen-Rā, who wears the crown with double plumes and holds a scimitar in his right hand and the *was* sceptre in his left hand. In front of him is written "Words spoken by Amen-Rā, the lord of heaven: 'I have given to thee victory,' " etc., while in the two perpendicular lines of text behind him are set out the various benefits the god has bestowed upon the king: "I have given to thee all boundaries which thou hast wished for to the limits of the pillars of heaven. . . . Thou art as Horus upon earth."

Facing the god, and on the right side of the stela, is the other figure, which represents King Rameses II himself. He holds a bow in his left hand, his other hand being raised in adoration to the god. On his head is the battle helmet with uræus and plume attached. The hieroglyphs above contain the throne name and personal name of the king (see below, first note on the texts): "THE GOOD GOD 'Wesr-Maāt-Rā, setep-en-Rā'; SON OF THE SUN 'Rā-meses-meri-Amen'. Is granted life and joyfulness to him forever like Rā."

Between the god and the king are representations of various Canaanite vessels which the king has captured as booty and which he is offering to Amen-Rā.

THE HORIZONTAL LINES OF TEXT

The twenty-four horizontal lines of text below the above scenes give, in the following order:

- (1) The date of the stela, which is "Year IX, month IV of winter, day I", *i. e.*, 1284 B. C.—Beginning of line 1.
- (2) The five "great names" of the royal titulary.—Lines 1-2.
- (3) A general description of the bravery and other qualities of the king, etc.—Lines 3-24.

In cartouche-like enclosures at the bottom of the stela are written the names of the chief foes of Rameses, each enclosure having the figure of a manacled captive above it. The names are very much erased, but among them may be read the "Bowmen of the

desert"; the "Āamu"; the "Shasu(?)"; and the "Lords of the North". The last mentioned are Mediterraneans. The small perpendicular line of text separating the enclosures into two parts reads: "All lands and all foreign countries are under [thy] feet."

The year in which the stela was erected may very well have been the year when the great citadel comprising No. V city-level was built by the king, for we see from other sources that he was obliged in the previous year to reconquer the cities of Galilee, a Hittite outpost at Dapur in North Syria, the Hauran, and the region east of the Sea of Galilee, where he left a stela recording his victory.¹⁹

It has frequently been stated elsewhere that the stela here described refers to the building of the city of "Raamses" of *Exodus*, i, 11, but this is not so. The text contains no mention whatever of any such building operations, nor of the Israelites, although it certainly does contain a reference to the famous Delta town of Raamses (Per-Ramessu)—see the translation of lines 9 and 10 of the text below.

When, in line 20, we read that Rameses is to his enemies "like a fierce lion in a pen of goats", we cannot but help remembering the passage in *Jeremiah*, xlix, 19: "Like a lion coming up from the jungle of Jordan against the peaceful sheepfold, so will I chase them in a moment from their place."²⁰

It has not been possible, in the time at our disposal, to make out the signs in many of the weathered places on the monument; and so, for the present, we merely give translations of the various passages which are more easily readable, and postpone a complete translation of the whole of the text. Our readers may be assured, however, that the version now given omits nothing that is vital for a correct general understanding of this precious document.

1. Year IX, month IV of summer, day I. Live the HORUS 'Strong-bull-beloved-of-Maāt'; TWO LADIES 'Protector-of-Egypt-conqueror-of-foreign-countries'; HORUS OF GOLD 'Rich-in-years-
2. great-of-victories'; KING OF THE SOUTH AND NORTH, SEIZER OF ALL LANDS 'Wesr-Maāt-Rā-setep-en-Rā';²¹ SON OF THE SUN, OF HIS BODY, HIS BELOVED, LORD OF APPEARANCES 'Rā-meses-meri-Āmen',²² beloved of Āmen-Rā, the king of the gods.
6. . . . the chiefs of Rethennu²³ come making obeisance

7. . . . His will is powerful before all lands; his frightfulness cleaves their hearts when [he] enters in alone
8. in the dense masses of the enemy. [Their] warriors are made they into a holocaust. Speaking with his mouth, doing with his hands. At daybreak. . . .
9. he caused to retreat the Āamu, making to be at peace the fighting which had occurred among everyone; those who desire they come to him all bowing down
10. at his Castle of Life and Prosperity, 'Per²⁷-Rā-messu-meri-Āmen, Great-of-Victories'. KING OF THE SOUTH AND NORTH, 'Wesr-Maāt-Rā-setep-en-Rā'; SON OF THE SUN 'Rā-messes-meri-Āmen', great of victories
11. before all foreign countries like his father Set,²⁵ great of strength . . . widening his boundaries
12. as much as he likes. . . . All foreign countries are raging, and are made non-existent.
13. He enters [the fray] alone without another with him²⁶ . . . never has existed his like in any land . . .
14. . . . Succouring the feeble and the husband
15. of the widow (*i. e.*, a man who takes care of a widow), protecting the poor, responding to the speech of the afflicted, a brave shepherd in sustaining mankind.
16. a solid wall to Egypt, a buckler to millions, and a protector of multitudes. He rescues Egypt . . . the Āamu
17. to crush them. He causes all lands to be under his feet. KING OF THE SOUTH AND NORTH 'Wesr-Maāt-Rā-setep-en-Rā'; SON OF THE SUN 'Rā-meses-meri-Āmen'. Seizing his bow²⁷ on
18. [his] horse, he graspeth his arrows. He is like a circling star among multitudes in the strength of [his] arm. Seizing the rebels
19. of the ends of the earth, he overthroweth their chiefs together with their soldiers. Is his majesty in their sight like the Bull of Nubti²⁸ (*i. e.*, Set);
20. like a hawk in the midst of the sky to the birds; like a fierce lion in a pen of goats; like a fire
21. when it seizeth shrubs [with] savageness; a hurricane overturning in their [midst] equipped with shafts of fire. Are they (*i. e.*, the foes) like
22. bird-feathers before the wind. Never hath been done what he

hath done in any foreign country. KING OF THE SOUTH AND NORTH, THE IMAGE OF ÂMEN. . . . 'Wesr-Maât-Râ-setep-en-Râ',

23. SON OF THE SUN 'Râ-meses-meri-Âmen'. Hath made for him his scimitar an everlasting name before all foreign countries. Never spoke with boastings the SON OF THE SUN 'Râ-meses-meri-Âmen'.

24. [He] is an excellent place of refuge for his soldiers . . . KING OF THE SOUTH AND NORTH 'Wesr-Maât-Râ-setep-en-Râ', SON OF THE SUN, HIS BELOVED, LORD OF APPEARANCES 'Râ-meses-meri-Âmen', granted life.

NOTES ON THE TEXTS

¹ The titulary of the kings of Egypt consisted of five "great names", all of which are given on the monument:

- i. The "Horus" name, as representative of the old falcon-god Horus.
- ii. The "Two Ladies" name, as representative of Nekhebet, the goddess of South Egypt, and Wadjet, the goddess of North Egypt. (The "IX-Bows" referred to in this part of Seti's titulary are the nine main foes of the king.)
- iii. The "Horus of Gold" name, as representative of the golden falcon-god.
- iv. The "King of the South and North" name, or throne name. Seti's throne name means, literally, "Permanent-of-truth-is-Râ; begotten-of-Râ".
- v. The "Son of the Sun" name, or personal name. Seti's personal name means, literally, "Seti-beloved-of-Ptah".

² An epithet of Seti.

³ The warrior god of Hermonthis, south of Thebes.

⁴ The great goddess of destruction.

⁵ A name for Syria and Palestine.

⁶ There is some confusion in the text here. The expression *di-f kheti*, "he causes to retreat", is well known elsewhere, e. g., "He causes to retreat Libya" (line 5 of the Israel stela of Meren-ptah); "He causes the Asiatics to retreat" (line 9 of the Rameses II stela of Beisan—Gardiner, *The Geography of the Exodus*, *J. E. Arch.*, vol. X, part ii, p. 93); etc. The word translated "cease" in our text is a misspelling for *qen*; cf. *Wörterbuch der Ägyptischen Sprache*, part I, p. 177, *qen ābā*, "to cease boasting". See also the expression, "He causes the chiefs of Kharu to cease (*qen*) all boastings of their mouths", on the relief of Seti I illustrated by Breasted, *Ancient Records*, iii, p. 44. Cf. Brugsch, *Hieroglyphisch-Demotisches Wörterbuch*, iv, p. 1464, line 11 from top.

⁷ Apparently a name for Palestine.

⁸ The real meaning of these words is uncertain; they could be translated in several ways, e. g., "Protect them! Protect them!" (cf. Alan Gardiner, *Egyptian Grammar*, p. 223). The words may however be Canaanite (?) ones. A somewhat similar expression (*mek, mek*) appears in line 24 of the Israel stela, where the text presumably indicates that it is "of the speech of the foreigners". See Erman, *The Literature of the Ancient Egyptians*, English edition, 1927, p. 277.

⁹ i. e., a messenger.

¹⁰ In the original text, the determinative of the word "majesty" (*hem*), has no arms and the flail projects from the knees.

¹¹ On the expression "to the effect that" (*er-enti*), see Alan Gardiner, *op. cit.*, p. 174, par. 225.

¹² Hamath is the modern el-Hammi.

¹³ Pella is the modern Khirbet Fāhil.

¹⁴ Rehob is the modern Tell es-Sārem.

¹⁵ See remarks in note 10 above.

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¹⁶ Each army had a special name, that of Ámen being "Powerful Bows", or the like, that of Ra "Many Braves", or the like, and that of Sutekh "Strong Bows", or the like.

¹⁷ Yenoam, according to some authorities, is the modern Tell en-Ná'amch, but this is somewhat uncertain

¹⁸ See remarks in note 10 above.

¹⁹ Breasted, *A History of Egypt*, p. 436.

²⁰ *The Old Testament, an American Translation*, ed. by Prof. J. M. Powis Smith.

²¹ Literally, "Powerful-of-truth-is-Rā; chosen-of-Rā".

²² Literally, "Rā-has-given-birth; beloved-of-Ámen".

²³ The same as Retennu. See note 5.

²⁴ *Per* is "House."

²⁵ *i. e.*, the god Set. "Great of strength" is a title of Set.

²⁶ This must surely refer to the episode at Kadesh on the River Orontes, when Rameses tackled the enemy himself, his soldiers having temporarily deserted him. This was in 1288 B. C.

²⁷ Compare the bow held by the king as shown on the top of the stela.

²⁸ Nubti is the town of Ombos.

NOTE ON THE INLAY STANDARD

THE interpretation of the inlay standard in the MUSEUM JOURNAL of September, 1928, brought the following remarks from Mr. Woolley in a letter dated from Ur, November 18, 1928.

"There are a few details which ought to be corrected as they give a false impression in view of what I had said about the standard not being a reconstruction. P. 229, line 5: You say 'if this is the original order?' None of the inlay here has been disturbed at all. P. 230, bottom: This is incorrect. In this part two heads had been broken off and one was replaced, the other not found; but the figures though slanting outwards from the lapis ground are in position; each is cut in a single piece of shell and no two half figures have been jumbled together, for there are no half figures to jumble. They were simply pressed back flat into place.

"P. 232, line 5. Here you may be right. The last three figures in this row were dislodged and lay apart slightly from the standard; they seemed, however, to be in order and the position of each was noted and they were restored according to the notes written on the back of each as it was picked out of the earth; at the same time their order in the soil may have been accidental and your point about the rope is a strong one. On the other hand, inlay of this sort was not unique and the craftsman seems sometimes to have employed 'stock figures' without much regard to their suitability.

"P. 232, last line but one: As to 'reconstruction,' the three figures already mentioned were replaced. Much of the border on both the main panels was reconstructed; otherwise nothing in these panels except bits of lapis background has been disturbed. Of the end panels, that on the left in the illustration (p. 230) is original so far as it is complete. The pieces of inlay were attached to the end of the banquet scene, so that it was clear in which register each came. The upright staff in the top register lay across the goat (which clearly ought to have another to balance it) and I could not be sure how it ought to be arranged. The whole of the bottom register is right in so far as the positions go, but the spacing may be inaccurate for no lapis background remained and the exact relation between the figures was thereby lost. The second end panel is partly a reconstruction based on the first: the pieces were in complete disorder.

"I can say this with authority as—apart from some work on the border of the standard—the whole restoration of it and of the gold bull's head of the harp was done by myself (so I must pass as a 'Museum expert'!)"

The interpretation of the inlay standard was done with the help of photographs. After seeing the original in London, I think it is fair to say that on the three points raised by Mr. Woolley, he is right on the first, wrong on the third even if we blame the Sumerian artist, and we both erred in the interpretation of the second. Two right legs, one stripped and wounded, the second covered with a fringed loin cloth, cannot belong to a single man. They are not jumbled together but belong to a group: a wounded man helped from the battlefield by a companion. One head is still missing. The position of the left legs is better seen on the original. There are two figures in the group cut out of a single piece. But the second right leg need not be explained as slanting outward from the lapis ground.

For the care and ingenuity of his reconstruction in general Mr. Woolley needs no commendation.

L. L.

MUSEUM NOTES

APPOINTMENTS

At the stated meeting of the Board of Managers held on February 15, 1929, Mr. John S. Jenks was elected a Manager of the Museum to fill the vacancy caused by the resignation of General Harry C. Trexler.

At the meeting of the Board held on January 18, 1929, Mr. Horace H. F. Jayne, the Chief of the Division of Eastern Art in the Pennsylvania Museum, was appointed Adviser in Far Eastern Art in this Museum.

Dr. Leon Legrain, the Curator of the Babylonian Section of the Museum, has been appointed by the Trustees of the University, Clark Research Professor of Assyriology. This chair was founded in 1902 by the Messrs. Edward W. and Clarence H. Clark, who for many years were benefactors of the Museum and whose interest was largely concerned with the Museum's excavations in the East.

EXPEDITIONS

Reports of the current season's work at both Ur of the Chaldees and Beth-shan appear in the pages of this JOURNAL. At the conclusion of the work at Beth-shan, Mr. Rowe came to this country for his first visit. He is now engaged in preparing his reports on THE TOPOGRAPHY AND HISTORY OF BETH-SHAN and THE FOUR CANAANITE TEMPLES OF BETH-SHAN.

Mr. C. Leonard Woolley, the Field Director of the Joint Expedition of this Museum and the British Museum to Mesopotamia, arrived in this country on March 15 to deliver a course of lectures in the Museum and also to lecture throughout the United States and Canada. He will return to England in May to prepare for exhibition at the British Museum the finds of the present season which later in the year will be divided between the two museums.

Mr. Louis Shotridge, the assistant in the American Section, has spent the winter in southeastern Alaska collecting legends and folklore of his people, the Tlingit Indians.

EXHIBITIONS AND RECEPTIONS

On the afternoon of February 22, the Faculty of the University held its annual Reception and Tea in the Eckley B. Coxe, Jr., Memorial Wing.

The private view of the finds made in the royal tombs and in the other tombs of the predynastic cemetery at Ur during the seasons 1926-27 and 1927-28 will be held in the Eckley B. Coxe, Jr., Memorial Wing on the afternoon of May 24. On the following day, the exhibition will be open to the public.

GIFTS AND LOANS

The Museum has received as gifts the following specimens.

From Mr. Eldridge R. Johnson, a crystal sphere, two jade screens, two lapis lazuli screens, one jade figure, three coral figures, a bronze sacrificial bowl. These form a part of the George Byron Gordon Memorial Collection, of which a description was published in the March, 1928, number of the JOURNAL.

From Mr. T. Broom Belfield, a collection of Japanese netsuké and a large Japanese ivory carving, which were published in the June, 1928, JOURNAL. Mr. Belfield's gift also included two chairs with ivory frames and a work on netsuké.

From Mr. C. T. Loo, a Chinese stone altar.

From the Misses Bonsall, a Japanese mask, a set of Chinese carved ivory games, three palmleaf fans and a piece of decorated tapa cloth.

From Mrs. F. C. Durant, an Inca ceremonial stone bowl which had been on loan in the Museum for some time and which was described in the September, 1926, number of the JOURNAL.

From Mrs. Ebenezer Cary, a Maya painted pottery vase which she has placed on deposit in memory of her late husband, Mr. Ebenezer Cary. This superb example of the art of the Mayas is included in the portfolio of MAYA POTTERY published by the Museum.

From Mr. Guy R. Johnson, ornaments from the Indians of Peru.

From Dr. Richard J. Campion, four stone ornaments and seventeen pottery figurines from Venezuela.

From Mr. Francis Gow-Smith, two bows and six arrows, probably from Brazil.

From Miss Ada J. Gordon, in memory of her brother, the late Dr. George Byron Gordon, nineteen ethnological specimens from the Indians of Chile and Bolivia.

From Dr. Joao Alves da Cunha, a bow and fifteen arrows from South America.

From Mrs. Edward Bok, an Aleutian Island basket to be added to her collection of baskets already in the Museum.

From Mr. James M. Willcox, nineteen Eskimo ethnological specimens.

From Dr. Judson Daland, a cane from Bergen, Norway.

From Mrs. C. E. Dickerson, a pair of sandals and a beaded bag from Kodiak Island.

From Mrs. Edgar Fahs Smith, an Indian basket and a plate.

From Mr. Louis C. Clarke, a spearhead and five arrowheads from western Pennsylvania. Mr. Clarke has also deposited in the Museum as a loan nine arrowheads from Washington and two lanceheads from Utah.

From Mr. Philip Gabriel, an arrowhead.

From Mrs. Joshua Clayton, a Philippine shield, arrows and a wood carving.

From Dr. George S. Crampton, tom-toms from southwest Africa and a club from New Caledonia.

From Mr. John Frederick Lewis, South Sea Island clubs and paddles.

From Mrs. John Sparhawk, Jr., a carved wooden window and panel from a Syrian house.

From the late Dr. Charles C. Harrison, an Aubusson rug.

From Mrs. Theron I. Crane, a collection of seven American Indian ethnological specimens and forty-seven Oriental objects.

There have been received as a loan from Dr. Hermann B. Parker four stone specimens from Equador.

From Dr. Charles W. Burr, MOORISH REMAINS IN SPAIN and thirteen volumes of Maspero's HISTORY OF EGYPT.

From Mr. George Brinton Phillips, two copies of his work, PREHISTORIC METALLURGY.

From Miss Blanche Hunter, in memory of her sister, Miss Annie G. Hunter, books, drawings and plates prepared by her for Maudsley's work on Central America.

PURCHASES

The following specimens have been added by purchase to the collections in the Museum.

A limestone head of an Egyptian woman, V Dynasty.

A porphyry head of King Akhenaten.

A diorite head of Gudea.

Two colossal stone chimeras from a Chinese royal tomb; which formed the subject of an article in the June, 1927, number of the JOURNAL.

A Chinese bronze gilt vase of the Han Dynasty.

5 T'ang pottery figures.

2 unglazed pottery horses of the T'ang Dynasty.

Chinese fresco from Moon Hill Monastery in Honan which has been installed on the east wall of Harrison Hall and which was described in the JOURNAL for June, 1928; also a panel completing the fresco from the same temple which is installed on the west wall of Harrison Hall.

A piece of Persian velvet.

2 tiles from Damascus.

1 Cinghalese mask.

A collection of 169 Wayang shadow figures from Java.

A group of approximately two hundred and fifty ethnological specimens collected by Dr. Amandus Johnson in West Africa.

Collections of African woodcarvings and other ethnological specimens mainly from French New Guinea.

An ethnological collection from the Islands of the Pacific.

31 specimens from the North American Indians.

PUBLICATIONS

Since the last announcement in the MUSEUM JOURNAL the following publications have been issued.

CULTURE OF THE BABYLONIANS, 2 volumes, by Leon Legrain.

ROYAL INSCRIPTIONS FROM NIPPUR AND BABYLON, by Leon Legrain.

AL 'UBAID, by H. R. Hall and C. Leonard Woolley.

UR TEXTS: ROYAL INSCRIPTIONS, by C. J. Gadd and L. Legrain.

EXAMPLES OF MAYA POTTERY IN THE MUSEUM AND OTHER COLLECTIONS. Part II, edited by J. Alden Mason.

THE MUSEUM JOURNAL

In addition to the two volumes which are being prepared by Mr. Rowe, the Museum has in press a volume by Mr. G. M. FitzGerald on the pottery from the four Canaanite temples of Beisan.

BUILDING

The new wing of the Museum on which work was started on February 18, 1927, has been completed and the installation of collections which have long been in storage in the Museum will begin in the near future.

CASTS

In September of this year the Museum entered upon a new activity when, in response to a demand on the part of members and the public, it placed on sale casts of objects in the Museum.

FORM OF BEQUEST

I give and bequeath to the Trustees of the University of Pennsylvania the sum of.....dollars, in trust for the uses of the University Museum. (Here, if desired, specify in detail the purposes.)

SPECIAL NOTICE

In order that The University Museum may give appropriate recognition to the substantial gifts which have been already received, and which will hereafter be donated or bequeathed for the development of its resources and the extension of its usefulness, the Board of Managers have adopted the following classification for contributors and members, and have resolved that the names of the donors of aggregate sums of \$25,000 and upwards, in cash, securities, or property shall be inscribed upon a suitable tablet or tablets, to be properly displayed in the Museum.

There shall be five classes of Contributors designated as follows:

<i>Benefactors,</i>	who shall have contributed the equivalent of \$50,000
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<i>Contributing Members,</i>	“ “ “ 100 annually
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Contributors and Members are entitled to the following privileges: admissions to the Museum at all reasonable times; invitations to receptions given by the Board of Managers at the Museum; invitations and reserved seats for lectures; the MUSEUM JOURNAL; copies of all guides and handbooks published by the Museum; and free use of the Library.

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THE MUSEUM
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THE MUSEUM JOURNAL

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PHILADELPHIA, JUNE, 1929

No. 2

A NEW EXPEDITION TO EGYPT

THE MUSEUM is pleased to announce that it is about to resume archæological work in Egypt. An expedition has been formed under the leadership of Mr. Alan Rowe and in November next it will begin work at Medum, a site which offers great possibilities not only for fresh contributions to existing knowledge in Egyptian research—always the principal aim of any archæological work—but as well for interesting and valuable material. The Expedition will be carried on under the auspices of the Eckley Brinton Coxe, Jr., Foundation, established for the support of the Egyptian Section and for the furtherance of field work in Egypt. The Museum is of course greatly in debt to the Egyptian Government for its permission to carry forward the intended excavation and wishes at this time to give recognition to those who have cooperated so courteously in this regard.

Previous excavations at Medum have been made by Professor Maspero in 1881–1882 and by Professor Petrie in 1891 and 1909–1910. It is intended that the forthcoming expedition will largely extend the work of these earlier excavations. Mr. Rowe has outlined the situation, history, and possibilities of this site in the following paragraphs which will serve to indicate briefly the work planned for the coming season.

“Medum lies in the Libyan desert, roughly between the northern end of the Fayyum and the River Nile, some fifty odd miles south of Cairo. To the north of Medum and in the following order from south to north, lie the following Ancient and Middle Empire pyramid sites: Lisht, Dahshur, Sakkara, Abusir, Zawiet el-Aryan, Gizeh, and Abu Roash, the last mentioned being a few miles to the west of Cairo. To the south of Medum are the Middle

Empire pyramid sites of Illahun and Hawara. All these sites really form one continuous royal cemetery nearly sixty miles in length on the western side of the Nile.

"As we shall see later, Medum apparently consists chiefly of a Fourth Dynasty site, dating onwards from about 2930 B. C. The most important structure visible is a great pyramid of three, originally seven, square receding stories which according to Professor Steindorff, rise to a height of two hundred and fourteen feet eight inches in steep stages at an angle of seventy-four degrees ten minutes or, according to another authority, seventy-three degrees thirty minutes. The first story is eighty-one feet six inches high, the second ninety-eight feet eleven inches, and the third, now almost destroyed, is thirty-four feet three inches high. Professor Petrie points out that the pyramid was built cumulatively—that is to say, in [seven] successive coats each of which bore a finished dressed face' around a central mastabah tomb. He states that the stepped stories were originally filled out in a smooth slope from top to bottom at a different angle to the coatings; this outer filling or casing was removed at an early date, perhaps by Rameses II. Owing to its storied appearance the pyramid is called by the Arabs *El-Haram el-Kaddab*, that is, 'The False Pyramid.' The entrance to the pyramid is far above the ground level on the north side, whence a passage slopes downwards to the sarcophagus chamber which is situated in about the centre of the base portion of the structure. Fragments of a plain wooden sarcophagus, perhaps forming part of the original royal burial, were found in the chamber.

"On the east side of the pyramid is a small temple, which consists of a rectangular building with an entrance passage at the east leading into a centre chamber. A door in the western wall of the chamber opens into the inner sanctuary, the back wall of which is formed by the sloping face of the first story of the pyramid. The sanctuary contains an altar and two uninscribed stelæ.

"Enclosing the pyramid and the temple is a wall, now in ruins, which has a door in that part of it which is opposite to the entrance of the pyramid temple. The door leads from the temple enclosure out on to a causeway running downwards into the valley to the east of the pyramid and temple. By analogy with other Ancient Empire pyramid sites we must assume that there is a temple at the lower end of the causeway, but this has not yet been found. Some magnificent statuettes came from the valley temple of Mycerinus at

Gizeh when it was unearthed some years ago by Dr. Reisner of the Harvard-Boston Expedition. Just to the east of the causeway and running diagonally downwards from near the top of it to the valley below is an approach; according to Mr. Wainwright, who found it while working with Professor Petrie at Medum, this approach was apparently filled in before the pyramid was completed. It was perhaps the road upon which the stone quarried in the hills on the opposite side of the Nile was hauled up to the pyramid site. The pyramid temple, the peribolus wall, the causeway, and the approach at Medum are now covered up by the sands of the desert, and will be cleared by us during the course of our work this year.

"From various graffiti made in its temple by visiting scribes during the Middle and New Empires we gather that the Medum pyramid was erected by king Seneferu, although a certain eminent modern authority believes it may have been made by Huni, the predecessor of Seneferu. One of these graffiti reads: 'Thrice beautiful (*neferu*) is the name of king Seneferu.' This sentence contains a play on words, for *Seneferu* actually means 'Making Beautiful.' A most interesting graffito in the temple is one dated in the forty-first year of the reign of Thothmes III (1501-1447 B. C.). This has been published by Dr. Griffith and reads: 'The scribe Aa-kheper-ka-Ra-senb, son of Amen-mesu, the scribe and reader of the deceased king Aa-kheper-ka-Ra (Thothmes I), came here to see the beautiful temple of the Horus [king] Seneferu: he found it like heaven within when the sun-god is rising in it: and he exclaimed 'The heaven rains with fresh frankincense and drops incense upon the roof of the temple of the Horus king Seneferu'. And he says, 'O every scribe, every reader, every priest, who reads this inscription, and all people who hear it, as ye would win the favour of your local deities, transmit your offices to your children, and be buried in the necropolis of the god Ptah . . . on the west [of Memphis], after old age and long life on earth—so say ye: May the king give an offering, and may Osiris . . . the god of Abydos, and Ra-Harmachis, and Atem, the god of Heliopolis, and Amen-Ra the king of the gods, and Anubis . . . who dwells in the place of embalmment . . . give offerings. May they grant a thousand loaves of bread, a thousand jars of beer, a thousand oxen, a thousand fowls, a thousand offerings, . . . a thousand of every good and pure thing that heaven gives, that the earth produces, that the Nile brings from its source, to the *ka* of the Horus king Seneferu.'

"We know from private tomb inscriptions of the Fourth Dynasty that Seneferu had two pyramids each called Kha-Seneferu (literally, 'Seneferu has appeared'), one of which was sometimes referred to as the 'Southern Pyramid Kha-Seneferu'. It has been shown by Dr. Borchardt that one of these pyramids is the northern stone pyramid at Dahshur, not far from Medum, for he found a pyramid-city of Seneferu at the end of its causeway and also a decree of Pepi I of the Sixth Dynasty confirming certain rights of the inhabitants of that city. In view of the references to Seneferu in the graffiti translated above, the mention of a district named 'Nurse of Seneferu' in a contemporary mastabah near the Medum pyramid, and the generally accepted idea that there seems to be no other pyramid available which could be regarded as the 'Southern Pyramid Kha-Seneferu' except the Medum one, the connexion of Seneferu with Medum seems at present to be fairly well established; perhaps our excavations will enable us to settle the question of identification. A statuette bearing the title 'Overseer of the Two Pyramids Kha-Seneferu' is said to have come from the site. Also, Professor Petrie found at Medum the base of a statuette of a woman which bore an inscription mentioning Djed-Seneferu, a place in which, according to the Westcar Papyrus, lived a magician in the time of Cheops, the son of Seneferu. The papyrus informs us that the magician 'is a townsman of 110 years, and he eateth five hundred loaves of bread, a haunch of beef in the way of meat, and drinketh one hundred jugs of beer, unto this very day! He knoweth how to put on again a head that hath been cut off, and he knoweth how to make a lion follow after him, with its leash trailing on the ground.' Djed-Seneferu is doubtless the district of Medum itself. The same papyrus also gives us details of how another magician amused king Seneferu when he was sad on one occasion by taking him out for a row on a lake. One of the maidens who rowed the boat happened to drop a malachite pendant in the water, whereupon the magician piled up the water at one end of the lake and recovered the pendant. This story reminds us of the dividing of the waters for the Israelites, as referred to in *Exodus*, xiv, 16-22.

"The Medum pyramid seems to have been the third of the great completed pyramids in order of date constructed in Egypt, the first being that of Zoser at Sakkara, the second possibly that of Kha-ba(?) at Zawiet el-Aryan (both of the Third Dynasty), the fourth that of Seneferu at Dahshur, and the fifth that of Cheops at

Gizeh (both of the Fourth Dynasty). Nefer-ka (or Huni?) a king of the Third Dynasty commenced a pyramid at Zawiet el-Aryan, but never completed it. It was the famous Imhotep, the master-architect of Zoser, who erected the oldest Sakkara pyramid and its wonderful temple (recently found by Mr. Firth of the Service des Antiquités), and who had, as pointed out by Dr. Reisner, 'apparently translated for the first time the highly developed crude-brick architecture of that period into finely dressed small blocks of limestone. In the Fourth Dynasty, a few generations later, the unknown architects of Seneferu and Cheops had substituted massive blocks of limestone for the small blocks of Imhotep, and had also begun the translation of the limestone architecture into granite.'

"At Medum are many tombs of various periods including mastabahs belonging to Ra-hetep and Nefer-Maat the sons of the king who built the pyramid. Two magnificent statues of Ra-hetep and his wife Nefert are among the finest treasures of their kind in the Cairo Museum, while in the University Museum there is a painted fresco from the tomb of Nefer-Maat.

"Summing up, therefore, we have at Medum a royal pyramid site founded probably at the commencement of the Fourth Dynasty by Seneferu the first really great king of Egypt. Seneferu worked mines in Sinai; built vessels nearly one hundred and seventy feet long for traffic on the Nile; sent a fleet of forty vessels to the Syrian coast to procure cedar logs from the Lebanons; and made raids from Egypt southwards to the land of the Nubians and southwestwards to the land of the Libyans. The greater part of our knowledge of the events of his reign is obtained from inscriptions of later date, such as the text on the famous Palermo Stela of the Fifth Dynasty which contains the annals of the early rulers of Egypt.

"The length of the reign of Seneferu is unknown, but it was probably from twenty-four to thirty-two years. He died about 2900 B. C., and was succeeded by his son Cheops, who built the great Pyramid at Gizeh. According to the inscriptions Seneferu had three queens, Merit-ites, Meres-ankh, and Hetep-heres I, the mother of Cheops. The transferred burial of Queen Hetep-heres was found in a secret tomb at Gizeh, in the commencement of the year 1925, by the Harvard-Boston Expedition. Her original tomb has not so far been identified. The eldest son of Seneferu was Ka-nefer who was buried at Dahshur; it was probably due to intrigues of some kind that on the death of their father, Cheops and

not Ka-nefer ascended to the throne. The eldest daughter of Seneferu was Nefert-kau, who was buried at Gizeh near the pyramid of Cheops, her brother and husband.

"From the foregoing it will have been seen that Medum is a most important site, and it is to be hoped that its forthcoming excavation by the UNIVERSITY MUSEUM will provide much new light upon the period representing the end of the Third and the beginning of the Fourth Dynasty of Ancient Egypt. Very shortly, therefore, the fragrant rains from heaven will again be able to drop down upon the 'beautiful temple' of the king, while in the inner sanctuary where the prayers to Anubis and to Ra were chanted nearly four thousand nine hundred years before our time, there will resound the strange cries of the Arab workmen. Seneferu really needs none of the colossal monuments left by him to perpetuate his memory, for his recorded achievements alone stand as a witness for all ages to his greatness."

It is certain that those interested in the work of the MUSEUM will eagerly follow the results of the excavations at Medum, now under the direction of Mr. Rowe. It is naturally a great satisfaction to have the MUSEUM once more actively concerned in the field of Egyptian archæology where its earlier work, also carried on under the Eckley Brinton Coxe, Jr. Foundation, accomplished so much in the past.

H. H. F. J.

TWO SECTIONS OF CHINESE FRESCO NEWLY ACQUIRED

Belonging to the Great Kuan Yin Wall

BY HELEN E. FERNALD

TWO more portions of the huge wall painting from Yüeh Shan Ssü, near Ch'ing Hua Chên, have recently been acquired by the UNIVERSITY MUSEUM and are now reunited with the rest of the Kuan Yin wall, to which they both belong. The major part of this huge fresco was purchased in 1926 and was published in the MUSEUM JOURNAL for September of that year although several important parts of the painting were at that time missing and it could not then be ascertained where they were, or indeed that they had not been destroyed either during removal or in transit. The loss most seriously felt was that of the portion of the painting which contained the figure of the great seated Bodhisattva which should have appeared on the right side of the colossal central Buddha, to match that of Kuan Yin on the left. It is therefore most fortunate that this particular section, measuring over fifteen feet high and five and one half feet wide and belonging to the central part of the composition, should be one of the parts just acquired. The other is a smaller fragment, two feet wide and about five feet high, which, however, fills a keenly felt need on the other side of the wall and is, moreover, most interesting because of its subject. The acquisition of these hitherto missing parts has made it possible to put all the sections together and mount them as one immense wall over thirty feet long and eighteen feet high. The newly acquired sections may be clearly made out in the picture of the whole wall here reproduced for they appear fainter than the rest, due to the fact that they have not yet been cleaned. Their importance in the composition is here fully evident. There are still small fragments missing from along the edges but the central and main part of the design is practically complete. The MUSEUM now possesses almost in their entirety the two side walls of the great hall of a famous Buddhist temple. The opposite wall was purchased in the latter part of 1927 and was published in the MUSEUM JOURNAL for June 1928. Each wall is most impressive, with its tremendous enthroned



The Kuan Yin wall as it appears with the recently acquired sections incorporated in it
Total Length 30 feet 6 inches; Height 18 feet

Buddha in the centre, the colossal Bodhisattvas seated European fashion on either side, and the lesser Bodhisattvas, minor deities, devas, child devotees, and other figures grouped around. The paintings are in a fine state of preservation except that the surface is marred by innumerable pittings and scratches. Only at the bottom of each wall, however, has this surface been actually defaced, due doubtless to the dampness, and rubbish accumulating on the floor of the old temple.

As has been stated elsewhere, these paintings are not in the technique of true fresco but have been executed in some sort of tempera and the colors show certain enamel-like qualities. Chemical analysis will probably reveal the nature of the medium and explain why the black used for outlines is not so well preserved as are the blues, tans, emerald greens, and reds.

Considered even quite by itself and not as a mere part of a larger composition, the more important of the two recently acquired pieces of fresco is tremendously impressive. It shows the huge figure of a seated Bodhisattva over twelve feet high, with opaque halo behind the head and transparent halo around the body. The feet are firmly planted upon lotuses. The left hand, in peculiarly distorted drawing, lies palm upward upon the left knee while the right hand is raised in a variety of the *vitarka mudrā*, the attitude of exposition or argument. The whole figure is turned slightly inwards toward the central Buddha. Near the right shoulder may be seen the graceful form of a fair Bodhisattva wearing in the front of her headdress the disc symbolic of the moon, with points all around the circumference of it. In this moon disc, faded and defaced but still unmistakable, is a figure which certainly looks more like a monkey than the usual hare. This little Bodhisattva holds a scroll in her slender left hand. Her right hand and arm were on the great central section containing the Buddha which had already been in the MUSEUM for three years so that one of the most satisfactory results of the reunion of these hitherto missing parts with the whole has been the restoration to its proper owner of this severed right arm. A third figure appearing on this panel is that of a Buddhist priest who stands in the lower right corner holding a scroll.

As in the rest of the painting the flesh tones and many details of the background are a warm tan color. But this Bodhisattva is robed in a garment of glorious light green which is in striking con-



Newly acquired portion of the Kuan Yin wall painting, from Ching Hua Chên. A great Bodhisattva, probably Maitreya
Height 15 feet 3 inches; width 5 feet 6 inches

trast to the deep red of Kuan Yin's robes on the other side. The green is more yellow than the emerald seen in other parts of the painting. The blue scarf over the right arm and the mulberry coloured girdle, the green, blue, tan and gold of headdress and jewels, are all in a harmony which fits perfectly into the color scheme as a whole and tends to make the rich red of the Buddha's robe even more intense. And again is demonstrated that marvellous craftsmanship, that mastery of line which tells of a sure swift hand and an unerring eye, a love of rhythm and a joy in the quality of the line itself.

The smaller fragment fits down into a space on the other side of the painting above the Kuan Yin's left shoulder. It shows the little Bodhisattva of the Sun, the companion to her of the Moon opposite. In the front of her elaborate headdress appears the plain sun disc with the figure of the three legged crow in it and on her arm she carries a p'i-p'a, or guitar, ornamented with a starry pattern. Both she and the Moon Bodhisattva are in prevailing soft cream tones with merely touches of green, of dull gold, and of mulberry.

On the lower part of the larger panel, as is the case all along the bottom of the two walls, appear at about shoulder height a number of characters scratched or written upon the painting by pilgrims to the temple. Most of the characters on the newly acquired section are so defaced that it is quite impossible to make them out but three or four can be deciphered, *ya*—duty, *chia*—home, *mu*—wood, and *chê*—an empty word which may have been part of a name. There is no inscription which may give a clue to the date of the painting.

However, it is probably but a matter of time now before these great frescoes from Moon Hill Monastery may be dated with certainty. The Chinese Division of the Library of Congress, in charge of Dr. Arthur Hummel, has been making an extensive collection of the local gazetteers, or district records, of China, known as the *Fu Chih* and the *Hsien Chih*, and among them are those particular ones which concern the region in which is located Moon Hill Monastery. Dr. Hummel has been most kind in offering every facility for the search of these records.

Moon Hill Monastery is a very famous temple of Honan Province. It is located in the *Fu* (county) of *Huai Ch'ing*, and in the *Hsien* (district within the *Fu*) of *Ho Nei*. It appears upon maps both in the *Huai Ch'ing Fu Chih* and the *Ho Nei Hsien Chih*. Two



Bodhisattva of the Sun
Newly acquired fragment belonging to the
Kuan Yin wall painting from Ch'ing Hua
Chên
Height 4 feet 10 inches; width 2 feet

of these maps from the latter work are here reproduced. The first emphasises the mountains of the district. Above the plain, where lie the Fu city of Huai Ch'ing (懷慶府) and the little market town of Ch'ing Hua Chên (清化鎮), the mountains rise tier upon tier in a jumble of slopes and peaks dotted with temple buildings. And there on the lower slope of Bright Moon Hill (明月山) is Pao Kuang Ssü (寶光寺) now known as Moon Hill Monastery (月山寺). The second map, which is primarily to show the rivers of the region, includes, however, the foothills of the mountain ranges and there again we see our monastery pictured in a grove of pine trees. In this case the building is represented as two-storied. Three maps in the Huai Ch'ing Fu Chih also show a two-storied structure, and one of the maps reveals the fact that there were several buildings in this monastery group.

From the text of these records a number of enlightening pieces of information have been gathered, which, although not proving the date of the paintings, state very important facts about the monastery itself. According to the data given in the Hsien record under "Ancient Remains" this monastery was built in the 21st year of the Ta Ting reign of the Chin Dynasty (1181). In another section, that on "Hills and Rivers," we are told that the builder was the Buddhist monk K'ung Hsiang. The name first conferred upon the temple was *Ta Ming Ch'an Yüan* (great Bright Zen-Buddhist Hall), but in the Yüan Period this name was changed to *Pao Kuang Ssü* (Precious Light Monastery). In the 3rd year of the Yung Lo Period (1405) the place was repaired. Now it goes by the name *Yüeh Shan Ssü* (Moon Hill Monastery).

The temple seems to be especially famous because of the visit of the Emperor Ch'ien Lung in 1750. He presented it with three *pien ê* (door frame tablets with eulogistic inscriptions) and a pair of *Tui lien* (pillars inscribed with a matched couplet). The passage may be translated thus:

"The Yuan Yin Hall *ê* said:

" 'Compassionate thoughts are let fall like the clouds.'

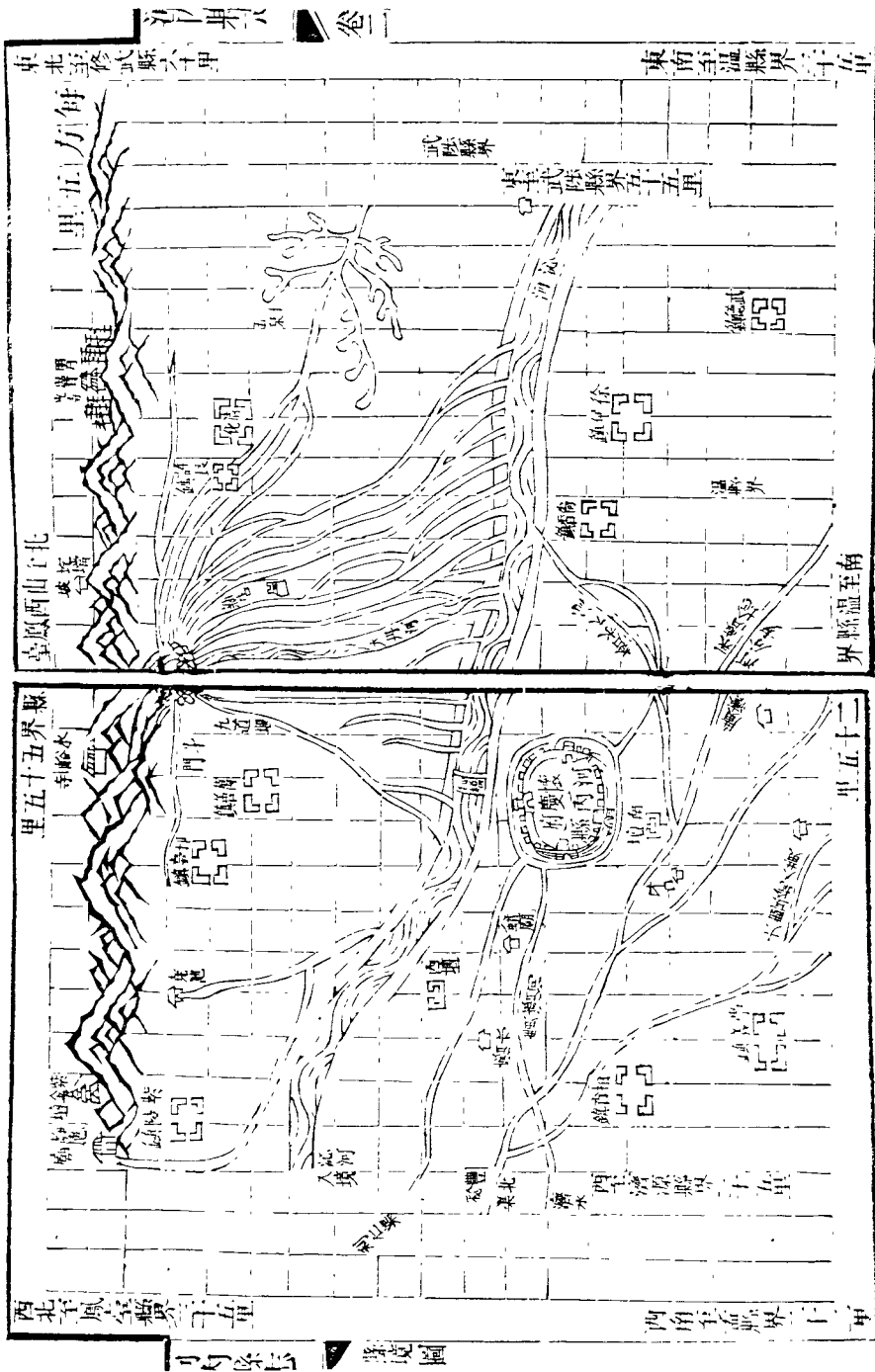
"The P'i Lu Hall *ê* said:

" 'The six Abhidhyā¹ completely surround us.'

"The Shui Lu Hall *ê* said:

" ' (Behold) inexhaustible glory and brightness.'

¹ The six supernatural faculties.



Map of the Waters of Ho Nei Hsien
 Showing the location of Pao Kuang S'u on Bright Moon Hill. From the Ho Nei District Gazetteer

"The Buddha Hall *tui* said:

" 'The meritorious virtue of the waters of Chou encircle thee bearing the bright moon's reflection.

" 'The peaceful clouds float in the clear precious sky, like streamers of incense so subtly waving.' "

The Hsien record continues with the quotation of other poems by famous visitors upon the beauties of Moon Hill Monastery. Unfortunately their praises consist in eulogies of the view and do not mention the paintings within the temple. Of special interest, however, is the fact that a part of the description given there is said to be a quotation from the "Pao Kuang Ssü Chi of the Yuan Period," thus indicating the existence of old Temple records. Such records doubtless contain all the desired data as to the paintings and one may hope to have access to this material some day in the future. The Huai Ch'ing Fu Chih contains mainly a repetition of the material in the Hsien record, but mentions one fact not given there, namely, that in the Yuan Period the Emperor T'ai Ting (1324-28) built (a hall?) here.

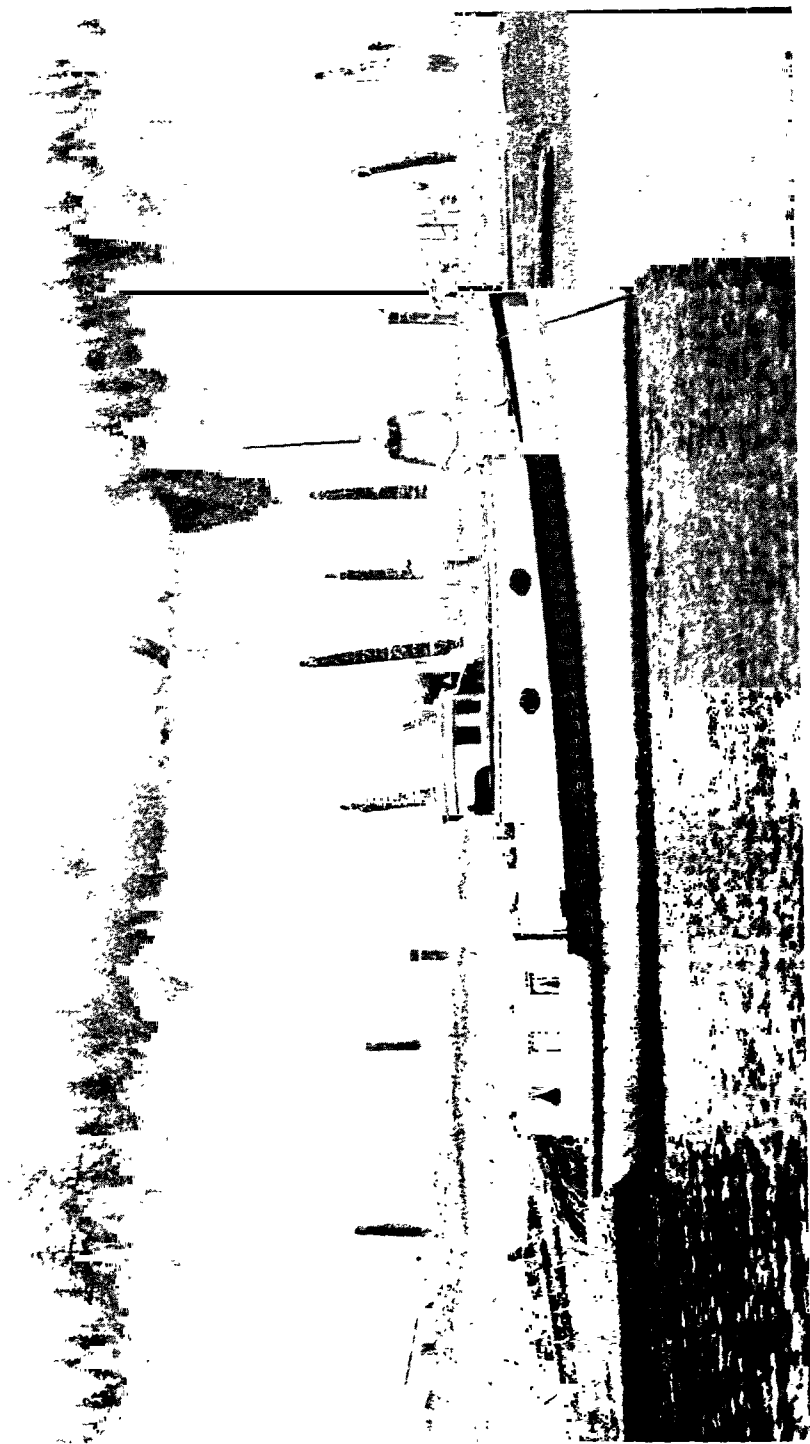
Thus we may definitely abandon the tenth century hypothesis for the date of the paintings, as it would appear that the monastery was not yet built in the T'ang Dynasty and our first information as to that was evidently incorrect. The monastery was founded in the Sung Period, in 1181, some building was done in the Yuan Period about 1325, and, finally, the monastery was extensively repaired early in the Ming Dynasty, in 1405, to be exact.

In composition and conception the paintings from Moon Hill Monastery are typical of the T'ang Dynasty although such emphasis upon line design is not known to be a characteristic of that period. As I stated in the MUSEUM JOURNAL for June, 1928, it seems unlikely that frescoes of this style should have been painted in the Sung Dynasty when the decidedly feminine conception of bodhi-sattvas was so popular—"more likely that they are Ming—if the tenth century hypothesis proves untenable". Early in the Ming period there began that revival of the old T'ang art which would account for the T'ang design and the masculine form of the bodhi-sattvas. And it may be noted that in the item concerning the repair of the monastery in the third year of Yung Lo the character *hsin* is used, a term which implies repairs so extensive as to mean almost a rebuilding.



Map of the Mountains of Ho Nei Hsien showing the location of Pao Kuang Ssu
now called Moon Hill Monastery
From the Ho Nei District Gazetteer

The two beautiful wall paintings from Moon Hill Monastery are therefore in all likelihood works of the early Ming Dynasty executed according to the T'ang tradition. The temple records themselves have yet to be examined but the evidence of the local Hsien and Fu records, embodying material that had been handed down in earlier editions for several hundreds of years, certainly seems to suggest 1405 A. D. or soon after as a very probable date.



The *Penn* lying at anchor at Kasam, the old town recently abandoned by the Haida people

THE BRIDE OF TONGASS

A STUDY OF THE TLINGIT MARRIAGE CEREMONY

By LOUIS SHOTRIDGE

MARRIAGE was honorable in all, and it was about this association of man and woman that all the Tlingit life revolved.

Among the better class the formal wedding ceremony was effected by vows; a promise may not have been heard spoken, in their hearts man and wife consecrated themselves to devotion. Thus, before the invasion of foreign influence, a union could not very well be terminated at the will of the husband or the wife, and at that time a man's word was sufficient means by which a union was bound. But now the white man's law has created in the minds of both parties a sense of independence—each may do as he pleases, and as the people acquire more knowledge of liberty the once confirmed custom of choosing a peer becomes vague.

There was a time too when it was a natural thing for one to know who was to be one's spouse, because the relationship of certain families was ascertained by a genealogical plan. A maid and a youth whose parents were of the same social standing were matched from infancy, and when they grew to a marriageable age no other person interfered. There was always a law which prohibited marriage between members of the same moiety of the two divisions of the tribe. A Tlhigh-naedi man could marry only a Shungoo-kaedi woman, and in such a reciprocal system the parties never failed in observing the ancient rule of choosing a peer.

Generally early marriage was encouraged; there were only a very few unmarried women among the people and the few single lives were caused by either a deficient mind or a belief in being a virgin; in the latter case the woman died unmarried. It was considered a man's duty to care for and protect the woman, therefore he had no excuse for leading the selfish life of a celibate. Wise men agreed with the old saying that life without a mate is something like an old-fashioned lullaby: at a certain age one grows weary of it; it becomes monotonous. Even a staunch-hearted celibate admitted that a fair mate makes the world a better place to live in. But one must be cautious in choosing a life-mate, since the motive of sundering an important relationship had been too often love for a woman.

All women were honored for their chastity and industry. The estimation of a good woman generally had lain in her capacity of increasing the clan to which she belonged. But there were families that considered a proper marriage also a means for the creation of a desired friendship and the maintaining of peace. Thus in our women was vested our moral standard, as well as the purity of our blood. The true Tlingit mothers taught their daughters that permanent success in marriage depended much on the wife's devotion and faithfulness, and that most failures had been caused by woman's frailty. Once I listened to an aged woman talking to her granddaughter:

"When I was a little girl I was never allowed to leave the house alone; even up to the day of my marriage I dared not talk freely to boys, because I was taught that there are men who are like the beasts of the forest, they are perpetually on a hunt for easy prey, and once that one of these has satisfied his desire, he merely walks off, leaving behind that which cannot be replaced. They are still everywhere, and their burning fire of love burns high, especially at night. Hence, it is not more difficult to find a bad man than it is to find a good one.

"It is true that a fallen woman has been known to rise once more, and proves to be a successful wife. The man in this case may have been only good enough to be kind to such a wife when he displays his generous admiration of her, in the effort to bury her past. But there can be no complete happiness in such a union, because there will lurk always in the man's heart the secret dissatisfaction with a wife who comes to him from another man. So it is wise to be cautious, and wait for the proper kind of a husband. He is a man to admire, as is a woman who is aloof and reserved, not one who is familiar and accommodating. In our time an honest woman was never an object of show, but now women of coquettish nature are not uncommon. So, my grandchild, not until you have acquired a good life-mate will I aspire relief."

It was always different with the men. It would seem that the good goddess of Destiny was more liberal in providing for their future. A good man may temporarily deviate, and sink into the mire of life, but he can always rise at will, and shake off all foul matters. Soon his faults are forgotten, and he once more steps out into society, wiser than before. Thus a well trained woman gloried in a male of wide experience. She had learned too that a true man

preferred not a woman of easy love, but one whose pride is a promise of resistance.

There is much truth in some reports that marriage among the Tlingit people was primarily by mutual consent of the parents of the candidates; as the young man received a wife from some other prescribed party, and the parents of both parties controlled the connubial contract, personal choice had little to do with the affair. But such prevailed only among the divisions where the custom of peerage had a chance to survive. Indeed, some people are fortunate



All that remains of the old Tongass village. On'y driftwood now lay undisturbed on this once busy landing

enough to have everything that makes up complete happiness in life, while others gladly take only that which falls to their lot. In Chilkat there were about as many fair maidens as there were desirable youths, and the parents had no difficulty in match-making.

When marriage was proposed among the better class, only the virtue of the candidates, and their ability to live together properly as man and wife, were discussed long and earnestly. Such families were generally admired, and throughout the Tlingit land the aged advised the youths: "Choose your equal in caste for a life-mate, and your children shall rejoice over their birth." With most classes such advice was indeed something more than a rustic youth could take and relish, for no social order can prevent a woman of an humble station to be born with a beautiful face and body, and a

handsome man did not often hesitate when it came to having his choice. Hence, it cannot safely be said that what one person did with success was true also with the whole Tlingit nation.

Like that which is known of all nations, men are not always alike in character—each has his own part to play in life. It is an ancient rule that his character and disposition are revealed in the man's outer personality. In the days gone by masculine vanity, among the Tlingit people, was not entirely absent. There were men who did not restrain themselves in the illusion of physical attractiveness, they were publicly pleased with themselves; they were often heard to tell with much pride about some small accomplishments of skill and chance; likewise their whole world must know about their success in love affairs.

When romantic love became real, desire in the vain man burst forth into sonorous emotion, and he composed songs in ecstasy of his desire. With such men love was something like a great bonfire of well-dried cotton-wood—it blazed high only for a brief moment, but it would soon die down under a heap of ashes. Good women were trained to always ward off the attention of such class of men. Then a man of such character usually ended his glorious days in settling down with some woman who in like manner had seen her own day, and was at last glad to have anything that she could get, or with one who was old enough to have been his own grandmother. He then often enough longed for some change, but he had learned and knew that if he could not get along with his emotionless mate he would soon find like difficulty with another.

There were also men who cherished the women for something more than the charm of their persons. In such hearts desire became devotion rather than possession, and a man wooing a maid with such limitless loyalty pledged, in silence, his faith to her through every trial until death. And such characters, as chosen from among those admired, were well portrayed as examples in the teachings of the true Tlingit parents.

As an attempt to rectify what seems to be a commonplace idea that marriage among the Tlingit people had been customary by purchase, I think it well to offer here a brief outline of dowering the newly-weds. Though the people knew that the impediment to early marriage was poverty, in order to save spiritual love from perversion the "wait for the capable age to support" was ignored, and early marriage was generally encouraged. Wise parents sought

means by which to overcome the obstruction. Hence, the custom of dower, the provident old custom which continued in its glorious development until it passed under the influence of modern life; thence, to undergo many sorts of abuse.

After putting to test that which he believed to be the right way, the best of the Tlingit fathers of the days gone by, spake and said to his son:

"I know that if you marry at this early age you will find it not an easy thing to support your wife in the comforts that she enjoyed in her long established home. But that is not a good reason why you should live apart in unnatural celibacy. Marry then, my son, and I will help you. I shall offer all that I can afford of those things which will benefit you. My own father did that for me, and I shall expect you to do the same with your own son."

My own experience as a bridegroom might convey to the reader's mind some idea of the system which the Tlingit employed in dowering the newly married couple. About one year after my parents called my attention to the girl who was to be my wife, I thought I was brave enough to be married, but when the final questions, "Now that you have learned her birth and personality, are you willing to marry the girl, and if you are, and she proves to be a devoted and faithful wife to you, do you feel that you will take good care of her, and always protect her until death?" were put to me, I became aware, for the first time in my life, of my cowering heart, and that most difficult word "yes" seemed to have echoed from the mountains across the bay, but it came out nevertheless, and my father only smiled when he said, "Very well."

One bright summer day, my aunts, cousins and all my maternal relations crowded into our house. Being the youngest and for only that moment the most important, I became a good target for all the unmerciful bantering, as the money was being counted out and other property bundled into packs, to be carried to the bride's home, which was a mile away. All my father's immediate male relatives were also called to assist him in his part. At last the jolly party was off, leaving me behind in company of one lonely uncle. All that was said at the bride's home I was not there to hear, but I guess both parties were pleased, as our party appeared in a reasonable time in the company of the bride. This was only the first part of our trouble, for we had to undergo also the white man's formality of a church wedding.

There were four different parties to be considered in all that pertained to such order of marriage obligations. They were collectively termed: "Brothers-in-law", men who were members of the clan to which the bride belonged; "Fathers-in-law", those of her father's; "Sisters-in-law", the women members of the clan to which the bridegroom belonged, and "Fathers-in-law", those of his fathers. In an indirect manner each party contributed its share in making



The dwellings have long since fallen to decay, but these
memorials stand as if waiting to tell the story of their
creation

complete the success of the marriage, and it was deemed a great honor to be included among those who gave a start to the new couple on the trail of their independent life.

On the day following the wedding feast, in which they were the guests of honor, my brothers-in-law called for me, and I was taken from house to house, where I received gifts of all that is necessary in a man's outfit. From one, a suit of clothes; from another, an overcoat. There were also a rifle and a shot gun, a new hat and

shoes. From more distant relatives I received mostly shirts and undergarments. And their consideration for me lasted as long as I played the part of a loyal friend-brother. In like manner a generous portion of the esteem from her sisters-in-law, which once had been all mine, became my wife's, and in turn she played her part in an excellent style, and she lived only to improve upon her character and personality, which was like a shining torch in the way of other women of her race, and until her death, never once did she fail in creating a pure friendship everywhere she went.

About four months after my marriage a number of young men of my own clan came along, carrying cross-cut saws and axes; together we went into the forest, where we felled only the choicest trees and cut them to pieces into firewood, these were hauled to my father-in-law, who was the elder of his clan. Thus I performed my first service as a son-in-law. With the Tlingit people, fire is the most important item in the comfort of life, as was expressed in the old saying: "Only by the warmth of an industrious man's early fire tarried the good goddess of Fortune." Hence, there can be nothing more appropriate than a supply of good firewood in rendering service to the comfort of the old man in his house.

In my father-in-law's house, the fire burned high, and all those who came within rejoiced in their welcome to this comfort. I was led to a seat provided for me. Presently the clansmen of my father-in-law began to come, and as each came near it he held both palms of his hands to the fire, as a sign of his appreciation of being included in the comfort offered to the master of the house. When they all came in, a large tray was placed before me, as if for one who was about to partake of a feast. The master of the house then called to the youngest fellow in the party of men:

"Now, Kiyida, come and do what you feel." The youth came forward, carrying a fine woolen blanket; this was spread out and placed on me as if to protect me against the draft from behind. "Even the smallest thing will help, my son, but the feeling with which it is offered is much greater than the gift itself," said the elder. The next man came forward and placed some money on the tray. In like manner all the men, each in his turn presented his "gift" in advance of a kind remark. The tray was then filled with money, and on both sides of it were piled high other property, when the main dower was brought out, and this about balanced the whole of the clan's share. The elder concluded by saying: "Indeed, my

son, these your fathers-in-law know that you are not in want, but what they offer to you here only represents their unanimous hearty wish for your immediate success in life. Therefore you will have no feeling of displeasure."



In view of modern life stands this old mortuary post, but the ashes of the departed have been removed from its cavities and buried elsewhere

According to custom, eight days following the marriage of his daughter the elder of the clan summoned not only his immediate kin, but all the members of his party, and among them distributed the property which my own party had presented, each receiving an

amount in proportion to his claim to relationship to the elder, and during the few months' time did what he could to increase this. Some of the men may never have received any income from their portions, but would not be outdone when another returned that which he had received twofold.

All this formality of providing for the young couple was put forward in addition to that which was something like a trousseau. In some families the youth who was about to be married was well outfitted, provided with all the necessities of one who was about to begin his independent life. There has been often heard a woman to speak of her early wifehood: "When we were married my husband had his own little chest of clothing; he had also his tools and utensils, and I also brought along my own, and we never borrowed from our neighbor."

Thus, it was always in this respectable manner that marriage, among the better class of the Tlingit people, was provided for. Everything given by all those concerned was only for the benefit of the new couple, but there was never such a custom as buying a wife. I do not blame a stranger for making this grave mistake, for I have taken a chance in looking at my own people through the white man's lens, and there beheld even our once glorious customs upside down.

Like that which is known to all races, most persons do not have everything. In the earlier days there were only a few among the Tlingit people who were fortunate enough to have enjoyed everything that makes up a complete happiness in life. Saetl-tin, the ideal maid who was later referred to as the "Bride of Tongass", was one born to a high caste parentage, with a beautiful face, and no wonder that Tah-shaw went a long way to get her.

It was at a modern wedding feast, after the dinner was over, the more important guests took their turns in making speeches. Some told about some comical experiences, in an effort to add more merriment to the occasion, while others imparted incidents that might affect something tending to the success of the new couple. Among these, one of the elders gave an outline of the well-known story of the marriage of Saetl-tin. At the moment I gave no more thought to the chief's narrative than to those told by the other guests, until the late Mrs. Shotridge remarked, after we came home, that the man told the same story at every wedding feast at which he

was a guest. My curiosity then was immediately aroused to learn whether the man offered this repeatedly merely to make known his own relation to the famous bridegroom, or really to effect some thought which might tend to the success of the new couple.



In Dasa-haku, a little isle once the stronghold of the Tongass people, the old memorials have grown beards

The first opportunity found me by the chief's fireside. From the start I was a welcomed good listener. It was obvious too that I was the one person who should know the details of that for which our clan must have the credit. The man was not only telling his

story, but at the same time very industriously handling his carving knife about the piece of wood which he was shaping to the likeness of some animal. Only when he came to an important part did he, for a moment, lay aside the effigy and use his tool as a pointer. And this "chip and stop" went on until the narrator felt that the force of his narrative was hitting its mark, and then both image and tool were laid aside.

It was chiefly to confirm the story about the "Bride of Tongass" that I undertook to cruise the whole of the southeastern coast of Alaska, and thus acquaint myself better with the geographic conditions, while following, as near as the weather conditions permitted, the course of the famous bridal party of old. Starting from Chilkat, at the head of Lynn Canal, I made my way down along the mainland to the international boundary. On my return, in a zigzag fashion, I navigated among the islands, some of which appeared, to one in a small motor boat, like continents in themselves.

It was the month of June, a month once supposed to be the "Moon of pups", when the baby seals are yet too weak to protect their own heads from being crushed against rocks, but Sana-haet (god of Storm) must have just then felt like flirting with the fair goddess of Calm when we shipped to round Cape Fox. We kept our course at a safe distance of about four miles off shore, and little old "Penn" ploughed onward, fighting admirably the angry ocean. By this time my youthful deck-hand was accustomed to the rough times in a small gas-boat, and regardless of the many dangers appeared unexcited and fearless. Besides my constant attention to the engine I kept my eyes on my charts.

Steering northeast, at last, in which direction I supposed Tongass Island to lie, we ran with the wind and sea in our favor. In the midst of all this excitement I thought of the brave men of old. How well they mastered their dugout cedar canoes in these rough waters, but they had learned and understood their land and all there is in it, and in turn it understood them. The great Sana-haet was known always to be on friendly terms with one who recognized his power, therefore he would impart to the true seafarer his intentions by means of a number of familiar signs, and a true seafarer was not often heard to tell about like experiences which I had to undergo during this particular cruise.

In my lookout for the location of the old Tongass village it was difficult to pick the right island among many others, as the ever-

green forest on these was blended into that of the main land. Through the mist of the spray I saw that which appeared like withered stalks of giant wild celery. Half a mile closer, through my spy glasses; I at last made out what these were—totem poles, the principal objects of interest now in most of the abandoned old towns that I visited on this trip, relics of the aboriginal life of the region. Silently they still stand, sentry-like, each telling its own story.

The first view of the historic old town now abandoned was depressing; I could not avoid the feeling of gloom, especially in that cold gray afternoon and after experiencing, only a few days before, the rush and bustle of the lively modern towns; from the deck of our launch we had watched the concrete buildings and the great fish depots disappear behind an island and heard for the last time the cheery roar of the street traffic. We made fast close to a sandy beach across a narrow passage from the village of Tongass, and landed in front of it in a small tender.

When I came up among the many totem poles, there I looked along a streak of a well-beaten-down ground, which for nearly a century had refused the staunchest weed to take root, an evidence of the town's main road, a street which seemed to listen still for the tread of the vanished chiefs. There is now only the wailing of the wind in the totem poles to remind one of the proud voices that once echoed there, and the far-away pounding of the Pacific Ocean to recall to mind the sound of the drums of the jolly dancers that passed here.

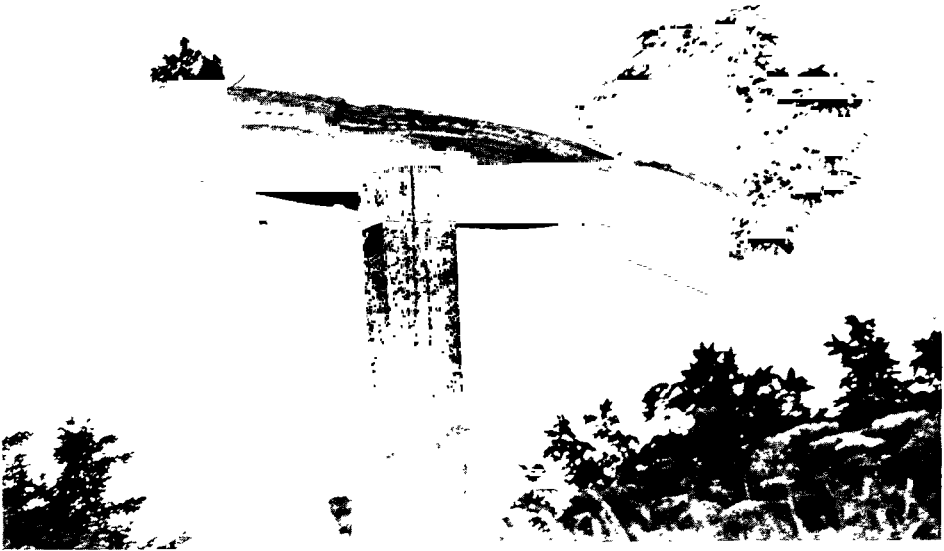
Into dusk I sat there on a fallen post thinking of the things they did there; sometimes I sighed and sometimes I smiled. Once again I thought of all that I had learned about the manner in which chief Negoot performed his part in the play of life, in order that those who follow may know that they were people also with their own pride, and to myself I repeated that never-to-be-forgotten story about the behaviour and magnanimous marriage of his beloved daughter.

For the benefit of the girl who believes that in every true woman's heart there is hope and longing for something nobler and better, and that in the blind searching after an ideal some women are made better, the story about Saetl-tin is repeated.

The story follows, as it is made up from the versions of the different geographic divisions of the Tlingit land.

WHAT TOOK PLACE IN THE NORTHERN END

In the old perilous days, in Grouse Fort, the land of the Kaguanton, on a promonotory, sat an old man much buried in thought, his worn face resting on the support of his forearms. In his day the old warrior had fought the fight of his forefathers. Thus, from youth he had contributed his share in building up the honorable position of his party. But now age had overcome all hope of taking an active part in the game of life. Hence, none else could he do but give counsel to the young. He was thinking not of the then



It is not natural for a tree to grow on the tail of a sea animal, but the old chiefs are no longer here to prevent such vandalism

impending war, but of the thing which, in his own mind, bore a weight which was equal to that pertaining to the clan affairs. The heir Tah-shaw had spoken of marriage; the youth had made known to his own mother the maiden of his choice. But Saetl-tin, the maid, was of a division far away. Yet the old wise head knew that distance was never an obstacle where a stout youthful heart was fixed on a fair maiden.

“What has an old man, grown grim and gray, to do with the wooing of a youth? . . . After all it might be well to let the lad do what best delights him, and come what may of this venture he alone shall feel.” Long in this position sat the old man, wistfully gazing on the peaceful ocean that stretched away into the far south-

ern horizon, still thinking. "The lad should wed a maiden of his own people, but he would go to the far south for a handsome stranger. There was a war between her people and us, and there are wounds that ache and still may open. Yet if the lad should wed the fair Tongass maid, that might unite our hearts once more in peace and the old wounds be healed and in time forgotten."

In the meantime, to and fro, by a stream of water in the deep forest, strode, with a confused air, Tahshaw, the rightful heir to chieftainship of the Kaguanton clan, also buried in thought. His father's father, the chief, had spoken his counsel, and spake in this wise:

"My grandson, your feeling is to take to yourself a wife. It is well that one in your position should marry, but one should choose a woman who shall be like a shining torch on one's path of life. You have had your training, my lad, and now is the best time to use your best judgment about whom you should take for your life-mate. We are now at the beginning of our history, therefore each one of us should take a firm hold on only that which will add to the achievement of true men.

"Our ancestors were a people with a history which is not to be admired by wise men—they appeared to have led much the same life as was natural to their station. But none the less, my lad, your turn to do noble deeds is in your veins. One of the main objects in a good man's life is to bring forth children with blood which is not tainted. I am not saying that the woman of your choice is below you, for her father is well known not only to us, but his name has been heard far and wide. But you have been fortunate, indeed, to have before you so many good maidens to choose from; here at Grouse Fort are daughters of the best men of our party; also in Chilkat are brought up maidens who do justice to their peerage. Yet, withal, your mind seems to lie on one in the far land."

The youth paused and sighed, and looked up to the clear sky as if about to supplicate. He loved the maid of his dreams, and was determined to win her for his wife, and nothing his wise grandfather, the chief, said could make him change his mind. Of course it was natural for the young man to be thinking and dreaming about the beauty of the Ganah-adi maid whom he had met in Tongass. He thought of her only as an ideal mate; he seemed to hear her low soft voice in the murmuring of the stream of water, and in the

sighing of the tree-tops, as he went about in the solitude of the forest.

The day for the start of the Tahshaw party from Grouse Fort was well chosen, it was one in the wake of Sana-haet (Southeastern Wind), and the spring moon was then appearing only with half-face; the tide reach too was getting shorter, and the way was clear for Hoon (North Wind) from the north, which on that day, under the cloudless sky, blew forth to give aid to the speed in direction of the land of the "Children of Tequedi".



The old town of Saniya-quan, now named Cape Fox Village, was said to be the last village deserted by its people

Tongass proper is located in a bay which is now known as Tamgas Harbor, at the southern terminus of Annette Island, and in the coast and geodetic survey, the old town of Kadoqku which is located on the shore of Nakat Bay, around Cape Fox, has been mistaken for it. From the northern shore of Icy Strait this was, indeed, a great paddling distance, but distance was never an obstacle for those old-time men when they went for something important.

With the people of Tongass first lived Aun-yatki, "Children of the Land", persons who lived for disciplining the moral and intellectual nature of their people. Without such persons it is likely that we might have become, once more, denizens of the forest, and never to be heard of. Here in this land of our ancestors, personal modesty was early cultivated as a safeguard, together with strong

self respect and pride of family and race. This was accomplished in part by constantly bringing out the child before public eye. His entrance into society, especially in case of rich parentage, was often publicly announced in a formal celebration called Yat-da-tiyi, "Event about Child".

Among the women there were rules that were not known to men, except to fathers of daughters perhaps; the women knew that when a maid passed from childhood to womanhood, she never knew how to take her first step upon such a change. So it became the duty of those who had passed the climacteric to take her in hand.

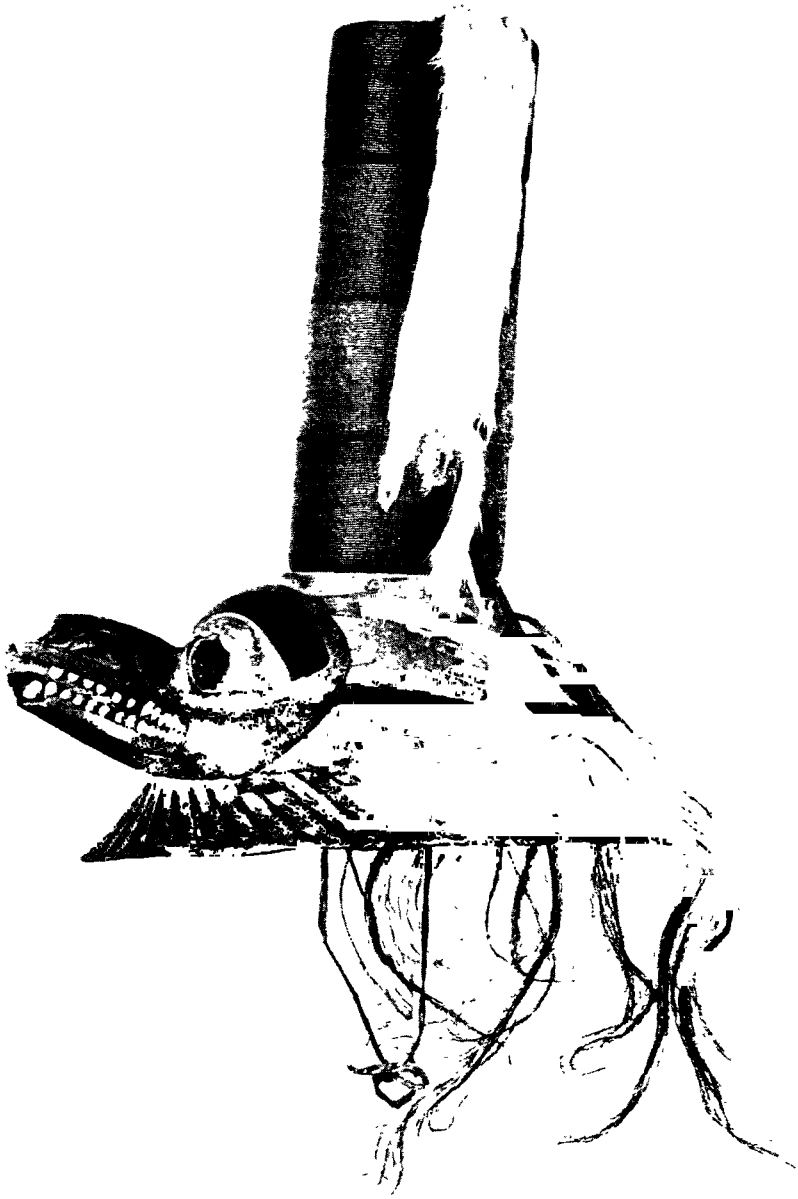
In old days when a girl reached the age of puberty, which is usually about fourteen, she was immediately taken in hand by the mother or an aunt. She was secluded for from one to four months without ever appearing in daylight. During this period of confinement she had to undergo a number of observances supposed to affect her future life. It was at this time too that the maiden was taught all the necessary duties of a true wife, as well as her domestic obligations.

Saetl-tin, the ideal maid, was among the first who were called the "Children of the Land", and was brought out before the public eight times. But the maid first became famous in the Tlingit world through observing to the full extent the customs imposed upon a girl at puberty. The young lady carried her part to an extreme when she, upon learning of her wedding moon, had her whole body kept covered with the soft skins of the underground squirrel, pasted on with pine-pitch. This was done to bleach the skin of the body.

WHAT TOOK PLACE IN THE SOUTHERN END

When the Grousefort party carrying Tahshaw, the prospective bridegroom, approached the entrance to Tongass, they were met by a darkened smoke of burning grease which filled the whole bay like fog. They must have been informed of the position of the travelers from the north, whereupon the whole town started to pour oil on the fire. This was a sign of prosperity, and done to impress upon the mind of the northern people that they were visiting the land of plenty.

The party arrived before the town. In the middle of the great war canoe, on a raised platform, was seated Tahshaw, the prince from the north land, adorned in rich fur; on his head he wore the Ganook Hat (page 147) which represents the most ancient being in



The Ganook hat in the Museum's collections An example of the early Tlingit art of wood carving and basketry

Tlingit mythology. "Who is there in the whole Tlingit land to boast of a possession greater in character than the Ganook Hat?" The canoe backed upon the sandy beach of Tongass landing. The people joyfully bade them welcome, and at once invited them to the house of Negoot. The chief's men then led the visitors into the house, and there they were seated on cedar mats and the softest fur. While they were being fed the townspeople came in to see the strangers from the north land.

The arrival of the Tahshaw party at Tongass was not a surprise, for it had been expected; therefore the people were well prepared to receive the young nobleman. The visitors were detained in town for four days, celebrating the festivals put forth by the chiefs of the different groups. In their turn the visitors also entertained the townspeople.

The morning of the fourth day was the time set for the wedding. In the presence of a great crowd of people the elder of the Tahshaw party told the House of Negoot the purport of their mission; told it the wish of the House of Tahshaw. And the speaker concluded in this wise: ". . . So Tahshaw, your descendant, has now come to your daughter, with an offer and proffer of marriage, made by one whose blood is not tainted, and who is true."

Negoot did not answer at once, but sat in silence for long. He looked at Tahshaw and thought, probably, what a handsome young man, and how proud he would be to call him son. And then he thought also of his lovely daughter, how well he loved her. Then he made answer very gravely: "Yes, it shall be as you wish, if the maiden wishes."

THE WEDDING

After both parties had been satisfied, one of the most unique marriage ceremonies was performed: At a sign of the chief, a precentor started a song and the great crowd joined in the chorus, and sang in a subdued tone. At her cue, from behind a beautifully carved screen, appeared Saetl-tin; on her face was well stamped a facial design representing "Star-fish, torn to pieces by the Raven". With the finish of the song she disappeared, but only to appear again to the accompaniment of another song, and wearing another design. In this manner the bride appeared eight times in succession, with eight different designs, each accompanied by its own song. The second was a design called Woosh-yik-kitli, (representation unknown);

then followed the "Tears of the Puffin"; the "Jaw of Killerwhale"; the "Ears of the Wolf", and the remaining three have been forgotten.

The Kaguanton clan, to whom they were presented by the famous bride, put the facial designs to a good purpose in later years. The "Ears of the Wolf" was often mentioned in connection with the heroic feats of Neech-kuwu, the fearless Kaguanton warrior.

After the conclusion of the first part, there was a brief intermission, while the bride made some changes. Presently the bride passed out, attended by well selected young female slaves, eight in number, and the maiden seemed more lovely as she stood there. There never was a more complete beauty than this maid of Tongass. Her eyes were long, sort of brownish black and languishing; her hair, also of the same hue as that of her eyes, hung down to her heels. To this must be added the item of a skin, pure and like a finely tanned skin of the doe. They say she was rather small in stature, but a well developed body offset the childish appearance.

Tahshaw himself found that the maiden of his choice was no debtor to the promise of her girlhood. She had amply fulfilled her obligations. A more sparkling bronze beauty he had never beheld. To all there was no sign of arrogance, but there was about her the air of humility, as one trained to render service only in silence. Shy and appearing neither willing nor reluctant, her head slightly bent forward and her eyes fixed on her linked hands, Saetl-tin went to her husband, softly taking the seat beside him, while the whole of Tongass looked on with mixed admiration and pride. Presently Negoot, the lord of the town, spake, very briefly, his part:

"Now, my daughter, it is your own heart which turned to this man who is now your husband. He is your peer indeed, therefore you should never be the cause of his shame; always be a good wife to him. Henceforth, you will follow him until death. And may the good goddess of Destiny guide you in the footsteps of those women whose beings have been a delight in their world."

When the father concluded, the maid seemed to relax, and her face changed color, as if suppressing a delight. Again there was a brief silence, and Negoot lowered his head as if to indicate the conclusion of his part. In like manner the bridegroom sat there in silence, but appeared rather embarrassed when the elder of his own party spake his part, in this wise:

"And you, Tahshaw, you take this maid for your wife—a life-mate. Henceforth, together you will proceed on the trail of life.

It is the man's part to be the guide, and it is his chosen course that the woman follows him. If he chooses the right way to success there she also succeeds, but if he deviates, though she may be aware of the wrong turn, yet she follows him, because of her faith and devotion. Shame, when it comes to him, is the man's own seeking, and disgrace knows where it is due.

"Now, Tahshaw, you have taken the lead, and to follow is one whom you esteem the most, your peer indeed. Therefore, there can be no leadership so sacred, no responsibility so noble. You are to be a true and devoted husband. For her sake will you stand firm, and drive off any evil which might threaten to harm, and have your heart like an invisible guard always hovering around your wife. If you succeed in this sacred duty to old age, none but happiness shall be your meed. But once you fail, your own shadow shall taunt you to your last days."

In their hearts, silently, the youth and the maiden repeated the words of betrothal; taking each other for husband and wife in the presence of their elders. Little did they know that they were then laying a foundation for that which was to be the way of the best of the Tlingit nation, and the laudable custom of our land.

After the solemn part was over, there were brief speeches, expressions of good wishes for the new couple, and all these incidentally changed into a revel, and the people were all happy. As they passed out from the house they gathered and crowded about the town, questioning, answering and laughing. That night, from the sky the great moon looked down at them and filled the town with mystic splendor. Even those brave warriors who had departed to the land of the Kiya-kawu (*Aurora Borealis*) appeared in the heaven to celebrate the occasion.

Negoot made a great feast in honor of his daughter's wedding, and sent messengers through the town, announcing at each doorway the invitation: "To the Bear House, you and the inmates of your house are called to partake of the maiden-lunch." Everything was now ready, and into the Bear House filed the Tequedi guests, each carrying his own bowl, most of which bore a carving of an object representing the owner's totem. When they were all seated, there was a brief speech, announcing the nature of the feast. And then Negoot, the speaker, called to his nephew (sister's son), who was his heir, to serve the guests, and a party of young men and women came forward to wait on the people.

There were choice fresh fish and the flesh of the deer in plenty, also berries of different kinds, sweet and healthy. It was a good feast, and every one ate heartily, except, perhaps, Tahshaw and Saetl-tin—their appetite for food seemed to have been overwhelmed by popularity, and the youthful couple sat there harrassed and appeared as if held at bay by a revel which seemed to be let loose, all at once, after a suppression.

THE DANCE OF FRIENDSHIP

The feast was about finished; the more important guests were then settling back comfortably, smoking their pipes, when a song was heard without. It was a Haida love song, chanted in perfect unison by many voices to the beat of a drum. Presently the door was thrown open, and the drummer appeared at the entrance dancing, his body moving in time with the beating of his drum. He was followed by a long line of dancers, women and men, who were all dressed in various styles of costumes their faces painted with red ochre and powdered charcoal, the tops of their heads sprinkled with cut down of the eagle, making the jolly dancers look as if they had come through a snow-storm. They all looked well indeed, and each one appeared as if there had never been a happier dancing than the one he was performing. This is a proper spirit when one is to enjoy what one is doing.

About half-way of the line of dancers the principal dancer appeared. He moved into the hall backward as if to show first the design of the robe he wore; jerking his head slightly to one side, as if testing the time of the song. When he backed within across the breadth of the upper terrace of the floor space, still moving gracefully to the tune, he gradually made a turn, and Kuh-teech, the greatest solo dancer among the Tongass people, faced his audience.

Kuh-teech wore a robe of buckskin, with the owner's totem well designed upon it; it was trimmed with strips of fur of the sea-otter, from his waist hung a covering something like a short apron, with fringe tipped with beaks of the puffin, which rattled to produce a sound like the burning of fresh spruce bough. In each hand he held a short stick with tassels of more of the beaks, rattling at each end. On his head the dancer wore a headdress of the Taw-yat (Flathead Indians). This was beautiful, it was said. The abalone shell ornamentation on it shone like sparks of the night fire; from its top end

stood the well-arranged long whiskers of the walrus which swayed like full grown cattails in a wind-storm; from the back hung a long trail of skins of the ermine, which also continually swung about in the air.

The skilful dancer timed his movements well enough to make his turn in time to take up the pronouncing of the words to the final verses, and the chorus kept up to his lead. The song was cleverly composed, expressing their rejoicing over the creation of peaceful love between the two great clans, the bride's and the bridegroom's. It was a beautiful song.

When all the dancers came within, the second or the real dance song, which was faster, followed immediately the entrance song. With this the dancer ducked like a slightly wounded halibut, then out of the cavity of the headdress emitted a great puff of well-cut down of the eagle. As the dance was heated up, like the first light snow of the season, this symbol of peace began to settle softly upon the assemblage, its softness seemed to soothe all prevailing hard feelings. And the people were much pleased and praised the great dancer.

The song and the dance were ended, and the dancers stood panting like hunters recovering from the effects of a long chase. In a labored manner Kuh-teech uttered a few words, addressing the bridegroom's party in this wise:

"Not to surprise you, oh children of Ganah-taedi, do I perform that which might agitate your peace of mind, but rather to express, in this lame fashion, the happy feelings of the children of Tequedi. At this moment, like the warmth of the sun, do they feel your honorable presence, and all together they rejoice in this."

With sincere smile the elder of the bridegroom's party answered: "Ho, ho (an expression of gratefulness), it is well, oh Children of Tequedi. In truth, into our hearts come home your words, and we feel it like the down which now settles on our heads. When we return to those who await us upon our land, we shall have in our possession to bring out before them, not only that which is good to the taste, but more of that which will create comfort in a true man's heart."

Thus, only a song and a few words uttered by true men acted like a great landslide, sweeping away all that which grew by years of struggle. Indeed, there was much truth in the old saying: "Put your full strength in swinging your club of fire, you cannot expect

your opponent always to fall without a return, but put on him a handful of the softest down, even a heart like stone will soften."

THE WEDDING JOURNEY

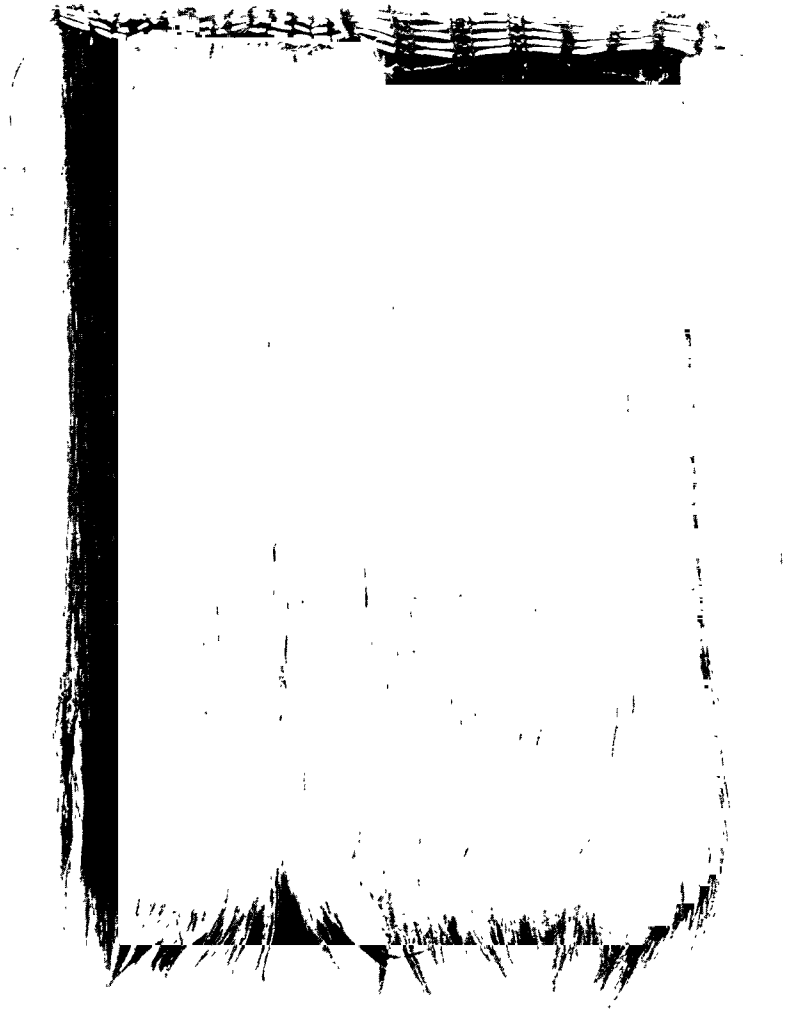
There is always an end to every nice thing; so it was to the Tongass people when the day on which the beautiful Saetl-tin was to take leave from among them dawned. On the shore, behind the waiting canoe, were assembled friends, young and old, saying their last few words. The young girls threw their arms about Saetl-tin with an expression of farewell, and the girl's mother returned many times after she had embraced her, to embrace her again. How much she loved her daughter, and how difficult it was to let her go with strangers.

There in the canoe were men, hearty and strong, each seated erect on his own end of the thwart, ready and eager for a start. They seemed to be anxious to put an immediate distance between themselves and what was to be left behind. In a section, one next to the bail-hole, which was all lined with rich fur, were placed the bride and the bridegroom. And at last, Saetl-tin, the most beautiful bride, was aboard, the great canoe was shoved off shore, and at once the paddles began to sway together, pushing behind the waters of Tongass, as with a feeling of pushing everything else to make way for that which awaited them. The people still stood on the shore, thinking, perhaps, that out of their midst was then borne away one who had made them feel proud only with the wealth of her being.

On the porch of his house stood Negoot, sadly watching the canoe as it went out to sea. At last it was lost to view, and the chief went back into the house, murmuring to himself and saying: "Thus it is our daughters leave us, just when they have learned to love us; when we are old and lean upon them, comes a youth, beckons to the fairest maiden, and she follows where he leads her, leaving behind only loneliness."

Lost in the sound of the paddles was the last farewell of the Tongass people. Soon the canoe was out on the homeward course, and the two sails were set to the fair south wind, blowing steady and strong in the warmth of midsummer sun. The great canoe gradually picked up more speed: plunging forward like a living mammal, raising its head after plowing into the long rolls of the ocean as if to show its pride of having the honor of being trusted

with the important passengers. Immediately in the wake of the bridal canoe came one which bore the dowry of the bride, well manned by slaves, under the command of a man who knew well the arts of navigating.



The Hair of Saetl-tin now in the Museum. It tells the story of its owner and represents the unfailing patience of the old-time Tlingit woman

All creatures seemed to appear, each to offer its share in making whole the success of celebrating man's happiest moment in life. From all directions came rushing the dolphin and the porpoise, swiftly slipping into the procession. Overhead the sea gulls shrieked their delight in keeping up. A duck, from a deep dive, rose to the

surface only to flutter aside in flight to make way for the violent rush. From the clear blue sky the great sun, benignant, looked down upon the party in mid-ocean. To Saetl-tin and Tahshaw love was then like this sunshine, and in their hearts nothing remained to cast a shadow. Thus, in such a benign atmosphere the most wonderful journey sailed on to the land of the Kaguanton.

A WELCOMED STRANGER

When the bridal party arrived in Grousefort, a party made up of the handsomest men of the town met the canoe at the landing. The young men went forward to carry the bride from the canoe, but to their disappointment they were ordered to stay clear and make way. To the surprise of the northern people, the maiden, of whom they had heard only as one who could not forbear blushing when she observed by a man's look that she had been an object of some attention, unassisted, stepped off on to a box, bare-footed, and as was intended, all those present had a glimpse of the most beautiful legs. At that time the women were clothed down to the very wrist and up to the very chin. The hands and face were the only samples they gave of their person. But since the arrival of Saetl-tin among them, some nice discoveries were made in their complexion, and mode of dressing.

In the home of her husband, Saetl-tin found everything peaceful and her reception very pleasant. The old persons who had objected to Tahshaw marrying the strange maiden, lest she should be idle and proud, found, however, that Saetl-tin's fingers were skilful, and did things for them regardless of her station, and that she was kind and gentle, even to one who was not in her class. As an evidence of her willingness to sacrifice for those whom she loved, we have only a part of Saetl-tin's long hair (page 154).

At one time when her husband was appointed as director of a great convention, the lady could not think of anything more appropriate to offer her beloved husband in his honorable office than that which she deemed her most esteemed possession, her beautiful long hair. Saetl-tin had this cut off at her waistline, the tips were worked into very fine braids, and these almost countless braids were formed into a wig-like headdress to be worn by Tahshaw on the great day of his first appearance. The UNIVERSITY MUSEUM has been fortunate enough to obtain also this specimen which must have required every ounce of patience of the old-time Tlingit woman.

Saetl-tin and Tahshaw truly loved each other, and as they grew old it made no difference to either whether the other was old and ugly, their love remained the same.

Thus, it was our ancestor Tahshaw who brought the loveliest of all the Tongass women, Saetl-tin, to his home, to be like the sunshine for his people. He had brought not an idle maiden, for Saetl-tin proved to be one whose hands and heart were ever ready to serve her beloved husband's people. To her old age she continued her pace on errands of mercy. And after those who had preceded her to the land of souls had reclaimed her, her name and the memory of her beautiful character remained for an inspiration, even on to our time.

TURQUOISE MOSAICS FROM NORTHERN MEXICO

BY J. ALDEN MASON

GEMS and semi-precious stones of rich colours or delicate translucency have forever attracted the æsthetic sense of man; their use is one of the human ties which bind the stock-broker with the stock-tender, the Parisian with the Persian, Queen Wilhelmina with Queen Shub-ad. Rarely does a land contain precious or beautiful stones which are not utilized by the natives for their adornment.

The prehistoric inhabitants of America utilized to the full the wealth of precious stones which bountiful nature set before them. In addition to the metals such as gold, silver, platinum and copper, —pearls, emeralds, opals, jadeite and nephrite, turquoise, lapis lazuli, amethyst, agate, quartzite and quartz crystal, beryl, carnelian, chalcedony, jasper, pyrite, chloromelanite, amazon stone, catlinite, obsidian, amber, shell, slate, and practically all other gems and stones which occur in America, with the exception of the diamond, were employed and worn by the ancient, and even by some of the modern, aboriginal peoples of America.

So ancient is the use of gems that a great body of folklore¹ has grown up around them. Probably no other class of objects is so bound up with superstition and magic. In former days almost every gem was considered to have an intimate relationship with some part of the body and to be a specific against ailments of this part, if either worn as a charm or eaten in pulverized form. Thus jade was considered a remedy against maladies of the kidneys, sapphire against apoplexy, moonstone against epilepsy, lodestone against headaches and convulsions, amber against a multitude of complaints, heliotrope against snake-bite and hemorrhages. Even more potent was the magical power of gems for good or evil, to bring good or bad luck, fortune, position, or love, to prevent insanity and in many ways to influence the life of the owner. So deeply rooted was this belief that its influence remains even today among

¹ Cf. the many writings of George F. Kunz, especially "The Folklore of Precious Stones," Chicago, 1894.

ourselves. Few of us would give an opal as a gift; even if we doubted its maleficent influence we would not risk the possible superstition of the recipient.

Among the stones most admired and treasured in America, especially by the highly cultured peoples of the Valley of Mexico, the home of the Toltecs and the Aztecs, were jade and turquoise. Jade in particular was revered and prized even above gold. The use of jade in Mexico has been considered in an earlier number of *THE MUSEUM JOURNAL*.¹ It is probable that the belief in the therapeutic effect of jade upon the kidneys and consequently the word *jade* itself, from Spanish *ijuda*, were originally brought from Mexico. Jade was apparently unknown to the average Spaniard of the sixteenth century. One of the extraordinary facts in connection with Mexican jade is that, although it is of a chemical composition different and distinguishable from oriental jade, and although we know the localities from which jade was demanded as tribute by the Aztecs, yet no occurrence of native jade in situ has ever been verified in Mexico. A short while ago a newspaper report was received of the discovery of a jade boulder, but this has not yet been substantiated. The rareness of jade obviously increased its value and this value probably intensified the search for it to such a point that the veins and boulders are now probably practically exhausted.

The story of turquoise in Mexico is similar to that of jade. The former stone was, however, already known to the Conquistadores who identified it in Mexico with no difficulty. The name, as may be guessed, comes from "Turkey" through the French, for before the days of Columbus the finest stones came from Persia by way of Turkey. It was considered a lucky stone and believed to change colour with the condition of the owner's health or in sympathy with his affections. "It has the virtue of soothing the sense of vision and the mind, and of guarding against all external dangers and accidents; it brings happiness and prosperity to the wearer. Suspended in a glass it sounds the hour. When worn by the immodest, it loses all its power and colour." Thus wrote the credulous philosopher Mylius in 1618. The last sentence, of course, afforded the loophole which prevented a critical test of the earlier statements, very much like the exquisite magic garments of the Emperor in the fairy tale, the cloth of which could not be seen by anyone unworthy of his office.

¹"Native American Jewels," XVIII, 1, March, 1927, pp. 46-73.

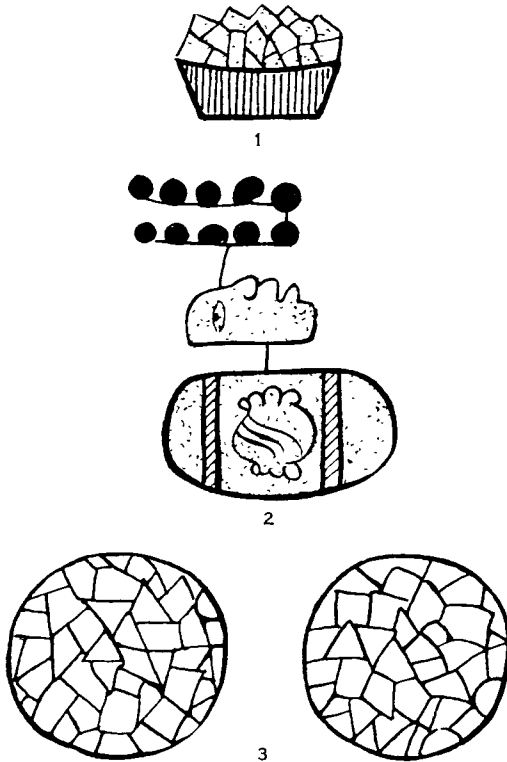
Matter-of-fact mineralogists state that turquoise is a hydrous aluminium phosphate and support their claims with a terrifying chemical formula, or rather with two rival formulas for the place. Our interest lying entirely on the æsthetic side, we shall not attempt to arbitrate the question, but shall be content with admiring the beautiful sky blue colour which tends in many examples towards green. It frequently occurs in thin plates like mica, a formation ideal for its employment in mosaics.

Turquoise was greatly prized in Mexico, although not so highly as jade; it was the stone of second value. The distinction made by the Aztecs between jade and turquoise is not quite clear and it has been thought by some that the Aztec word *chalchihuitl* may have been applied to any stone of blue or green colour which was worked for ornamental purposes. It would thus include jade, turquoise, quartzite, chloromelanite and other similar stones. It seems almost certain that in northern Mexico the term *chalchihuitl* was applied to turquoise, but it is now generally believed that in southern Mexico the word referred to jade, while turquoise was designated by another term *xiuitl*.

The source of the turquoise used by the Aztecs and their predecessors, the Toltecs, has, like the source of jade, created much discussion among students of Mexican archæology. As in the case of jade, its rarity contributed towards its value and vice versa, and the uncertainty of its identification with its specific Aztec term conduces to confuse the problem. Only in recent years has any mine of turquoise been discovered in Mexico, and no evidence of prehistoric mining was reported at this place. As in the case of jade, however, the "Tribute Roll of Montezuma" affords some clue. This is a pre-Columbian Aztec book in which were painted representations of the quantity and quality of tribute collected by the Aztecs from conquered vassal tribes and towns. The Aztecs had no true system of writing, hieroglyphic or alphabetic, however, and the symbols used for various objects are open to misinterpretation. In three places in this Roll objects which are interpreted as turquoises are found.¹ A representation of a bowl filled with angular

¹ The original Tribute Roll of Montezuma lies in the Museo Nacional of Mexico, except for a few pages which are in the possession of the American Philosophical Society in Philadelphia. Several reproductions of it have been published, the figures here illustrated being copied from that of Antonio Peñafiel in "Monumentos del arte mexicano antiguo," Berlin, 1890, plate 245, and that of D. G. Brinton in "The Tribute Roll of Montezuma," vol. XVII, part II, Transactions of the American Philosophical Society, Philadelphia, 1872.

objects as shown in figure 1 is interpreted as a small vessel of turquoises, and the six accompanying glyphs as the six towns from which this tribute was demanded. Another symbol, shown in the upper part of figure 2, is interpreted as meaning ten masks of turquoise. This and another tribute represented by the lower part of the same figure, which is interpreted as representing a bag of turquoises, were exacted of the six towns whose glyphs are shown on



1. Glyph representing a bowl of turquoises, from the Tribute Roll of Montezuma.
2. Glyphs interpreted as signifying ten masks of turquoise and a bag of turquoises.
3. Aztec glyphs designating turquoise mosaic disks.

the same page. Of seven other towns was required the tribute shown in figure 3 which obviously represents two plaques of mosaic, presumably of turquoise. No one has ever attempted the task which Mrs. Nuttall did so well in the case of jade, that of identifying and locating these towns, some of them long since deserted, others probably still existing under new names of Christian origin. From the meaning of their names it is certain only that they were in the warm parts of Mexico.

From the histories of Mexico we have one definite allusion to turquoise. In 1497 when the Aztec war chief Ahuitzotl was engaged in conquering the district around Tehuantepec, after the final battle in which the defenders lost their independence, the few survivors, consisting mainly of women, old men, and boys, sued for peace. "Valiant lords of Mexico, cease your fury . . . let us speak!" the chronicler¹ reports that the elders cried. "We will pay you tribute of all that is produced and yielded on these coasts, which will be *chalchihuitl* (jade) of all kinds and shades, other small precious stones named *teoxihuitl* for inlaying in precious objects, and much gold" The reference to inlaying can hardly be applicable to anything but turquoise, especially as we have other translations of *xihuitl* as turquoise. *Teoxihuitl* means "divine turquoise", apparently, and may refer to a variant form of the stone. It would seem, therefore, that turquoise was found in the district of Tehuantepec, but no mines are known today in that region.

The one place in which turquoise is known to occur in large quantities and to have been mined in ancient days is at the famous mine at Los Cerrillos near Santa Fe, New Mexico. The old workings are in a hill known as Mount Chalchihuitl. Here the Navaho, the Zuñi, the Hopi, and the other Pueblo Indians procure the turquoise for their ornaments and jewelry, just as their forefathers did for centuries. The standard theory is that all the turquoise used in southern Mexico was brought from this place either by trading from tribe to tribe or by long expeditions. It is quite possible that future years will disclose in Mexico itself the source of the turquoise of Aztec days, but for the present there is slight evidence of that and slight reason for discrediting the existence of a trade route from New Mexico to Mexico City; there are other indubitable examples of aboriginal trade for distances as great.

Sahagun speaks very clearly upon this point, saying,² "The Toltecs had discovered the mine of precious stones in Mexico, called *xihuitl*, which are turquoises, which mine, according to the ancients, was in a hill called Xiuhtzone, close to the town of Tepotzotlan." He says further,³ "The turquoise occurs in mines. There are some mines whence more or less fine stones are obtained. Some are

¹ Hernando Alvarado Tezozomoc, "Crónica mexicana," cap. LXXVI, pp. 543-544, Mexico, 1881.

² Fr. Bernardino de Sahagun, "Historia general de las cosas de Nueva España," lib. X, cap. XXIX, 1.

³ *Id.*, lib. XI, cap. VIII, 1 and 3.

bright, clear, and transparent; while others are not. . . . *Teoxiuilitl* is called turquoise of the gods. No one has a right to possess or use it, but always it must be offered or devoted to a deity. It is a fine stone without any blemish and quite brilliant. It is rare and comes from a distance. There are some that are round and resemble a hazelnut cut in two. These are called *xiuhtomolli*. . . .¹ There is another stone, used medicinally, called *xiuhtomoltetl*, which is green and white like *chatchiuilitl*. Its moistened scrapings are good for feebleness and nausea. It is brought from Guatemala and Soconusco (State of Chiapas). They make beads strung in necklaces for hanging around the neck. . . . There are other stones, called *xixitl*; these are low-grade turquoises, flawed and spotted, and are not hard. Some of them are square, and others are of various shapes, and they work with them the mosaic, making crosses, images, and other pieces."

The ancient mine near Tepetzotlan, presumed to be in the State of Hidalgo, has never been discovered, and, despite Sahagun's definite statement, its existence is doubted by those who believe that all turquoises were brought from New Mexico. The *xiuhtomoltetl* may have been a kind of turquoise, but more than likely it was one of the other greenish stones. Its medicinal use indicates that the ancient Mexicans had beliefs similar to those of Europeans in regard to the therapeutic value of precious stones.

That there was an intimate relationship between the Valley of Mexico and the state of New Mexico in regard to the use of turquoise is proved by several means. That the Zuñi and other peoples in the neighbourhood of Santa Fe possessed quantities of turquoises was well known in the Mexican state of Sonora at the time of the Conquest, and many natives of this region traveled north and exchanged labour and goods for these valued stones. The first traveler through this region, Alvar Nuñez Cabeza de Vaca who, in the eight years between 1528 and 1536 made one of the most extraordinary journeys known to the history of exploration, wandering from Louisiana to Mexico City, found the knowledge of turquoises general in Sonora and was presented by the natives with "many good turquoises, which they get from the north."² Fray Marcos de Niza who, stirred by the glowing accounts of Nuñez—for that is his proper

¹ *Id.*, lib. XI, cap. VII, 6.

² "The Journey of Alvar Nuñez Cabeza de Vaca, 1528-1536," translated by Fanny Bandelier, New York, 1905, pp. 156, 157, 177.

surname, though he will always be known to history as Cabeza de Vaca, just as Vasco Nuñez will always be known as Balboa—journeyed in 1539 to the fabled wealthy seven cities of Cibola, really the seven insignificant Zuñi pueblos, also heard of the wealth of turquoises when he was still in Sonora, a month's journey from Cibola. There he met Indians who had traveled to Cibola for turquoises. "I enquired of them", wrote the good father, "wherefore they travelled so farre from their houses? They said that they went for Turqueses, and Hides of kine (bison), and other things; and that of all these there was great abundance in this Countrey. Likewise I enquired how, and by what meanes they obtained these things? They tolde me, by their service, and by the sweat of their browes."¹ The fabulous stories of the quantity of turquoise and of gold to be found in Cibola need not detain us here; we may be certain that considerable amounts of turquoise were brought from the region of Santa Fe to northern Mexico, and probably a brisk trade in them was carried on with the Valley of Mexico, to Teotihuacan, the sacred city of the Toltecs, and to Tenochtitlan, the centre of the Aztec empire.

The Indians of the American Southwest still do much work in turquoise, and the stone plays a large part in their religious ceremonialism and mythology, indicating that its rôle has been important among them for centuries. The turquoises in Navaho silverwork, in rings and bracelets, are well known to tourists through the Southwest. Turquoise beads in necklaces and earrings are in quite common use throughout the Southwest, especially by the Pueblo peoples.

In addition to these methods of utilizing turquoise, it is sometimes employed in the form of mosaics, and this is the real tie which closely binds the American Southwest with southern Mexico of the time of the Conquest. Small and rather poor ornaments of turquoise mosaics are made today, or were made in modern times, by certain of the Pueblo peoples. Thus Hodge² says that "Earpendants practically identical in character [with the ancient turquoise-mosaic ear-ornaments] are sometimes worn by Zuñi women on gala occasions at the present time, although they have been superseded largely by silver earrings, often studded with turquoise . . .

¹ Hakluyt's *Voyages*, Glasgow, 1904, vol. IX, pp. 125-144.

² F. W. Hodge, "Turquoise Work of Hawikuh, New Mexico," Leaflet 2, Museum of the American Indian, Heye Foundation, New York, 1921, pp. 26, 27.

cemented to bases of wood with piñon gum . . . the workmanship is decidedly inferior to that of the ancient Zuñi of Hawikuh, the settings being placed without regard to regularity and without attempt to grind them to shape, while to meet the paucity of turquoise, small trade beads of blue glass are used in each of the three specimens mentioned."

Ear-pendants of turquoise mosaic, apparently identical with those from Zuñi just mentioned, are also still worn by Hopi women, or were in recent years. These are, like the Zuñi specimens mentioned by Hodge, simple, plain and rectangular, the pieces of turquoise irregularly placed with relatively wide irregular interstices. J. W. Fewkes,¹ speaking of turquoise ear-pendants which he found at Chaves Pass, Arizona, says, "Hopi women at the present day wear ear-pendants made of square wooden plates upon which are cemented rude mosaics of turquoise. The modern work of this kind is comparatively coarse, and evidently is made of old turquoises, some of which are perforated and were formerly used as beads. The turquoise stones employed are not accurately fitted, and the black gum in which they are embedded shows between the stones. The ancient work is much finer and more beautiful than the modern." Further information on this point is given by Curtis,² who writes: "In dances, and especially in Kachina dances, unmarried girls wore earrings made by smearing piñon-gum on a thin piece of wood about an inch and a half square, and setting bits of turquoise in the gum." Dr. Walter Hough³ gives an illustration of one of these Hopi mosaic earrings and says of it: "Turquoise mosaic earrings, constructed by imbedding small plates of the stone in gum covering a rectangular wooden tablet and finished by grinding and polishing, appear to be still made by the Hopi in perpetuation of the ancient art."

Archæological work in this region amply supports the evidence that the mosaic work of today is but the degenerate survivor of the almost forgotten art of the ancients. Apparently turquoise was much rarer in earlier days than at present, and on that account was more highly prized and carefully worked. The specimens found by F. W. Hodge⁴ at Hawikuh, one of the seven ancient "Cities of

¹ J. W. Fewkes, "Two Summers' Work in Pueblo Ruins," 22d Annual Report, Bureau of American Ethnology, 1900-1901, Washington, 1904, p. 86.

² Edward S. Curtis, "The North American Indian," Vol. XII, "The Hopi," 1922, p. 24.

³ Walter Hough, "The Hopi Indian Collection in the U. S. National Museum," Paper no. 2235, Proceedings of the U. S. National Museum, Washington, pp. 235-296. Cf. p. 272 and pl. 27, fig. 2.

⁴ F. W. Hodge, *op. cit.*

Cibola", comprise objects in greater variety and of greater merit than the mosaics of today, and verify some of the statements of Fray Marcos concerning the extent of work in turquoise at Zuñi (Cibola). Other scattered finds of turquoise ornaments have been made throughout the Pueblo region, but the most remarkable of all was made by G. H. Pepper at Pueblo Bonito in northwestern New Mexico, one of the largest and best preserved ancient ruins in the Southwest. Here, in one ceremonial chamber and in conjunction with several burials, probably of priests, were found more than fifty thousand beads, pendants and other worked objects of turquoise, and among them several mosaics.¹

Jet was frequently associated with the turquoise in these mosaics which were set in piñon gum on, or in, the surface of bone, jet, shell, hematite, and basketry. The work is exquisite, in many cases the bits of turquoise were cut to uniform triangular or rectangular shape so that they matched perfectly, and in practically every case the pieces were fitted close together so that no interstices are visible or at any rate obvious.

Having considered the nature of turquoise mosaic work in the American Southwest in present and in ancient days, let us turn once more to southern Mexico.

The ancient artisans of Mexico were famed for a number of crafts, but for none more than the art of making mosaics. Mosaic work in feathers especially impressed the Spanish conquerors and many specimens of this art were sent by them to Spain as proof of the consummate craftsmanship of the Mexican artisan. Glowing descriptions of the beauty of these objects and the marvel of their workmanship have come down to us, but as for the objects themselves, the few that have survived the ravages of moths, dust, and time are so bedraggled as to be of interest only to the technician. However the art of feather working, in a very rude and degenerate form, although of great interest to the tourist, still survives in Mexico.

The art of working in turquoise mosaic also impressed the Conquistadores who sent many such objects back to Europe where they created much comment on account of their rich colouring, careful workmanship, and exotic form. In this case we need not depend on

¹ George H. Pepper, "Ceremonial Objects and Ornaments from Pueblo Bonito, New Mexico," *American Anthropologist*, new series, VII, pp. 183-197, 1905. "The Exploration of a Burial-Room in Pueblo Bonito, New Mexico," Putnam Anniversary Volume, pp. 196-252, New York, 1909.

descriptions for our impression of these objects, for a number of them still exist in the museums of Europe, and a large number which were recently found in Mexico are now in the Museum of the American Indian, Heye Foundation, New York City.¹ One of the most perfect of all such mosaics, a plaque, was discovered within the last year at the ruin of Chichen Itza in Yucatan by the expedition of the Carnegie Institution. It now rests in the Museo Nacional in Mexico City. These are by far the most beautiful and striking objects which remain from the time of Montezuma. About forty-six pieces of major importance are now known, about equally divided between the museums of Europe and North America. Practically all of them are on a wooden base and the larger number comprise shields, masks, heads, figures, and knife-handles.

The native historians of the time of the Conquest relate that the Toltecs perfected the art of making turquoise mosaics, and this tradition is now verified by the discovery of the mosaic plaque at Chichen Itza, a city captured and rebuilt by the Toltecs, and presumably abandoned before the Aztecs had risen to power. Indeed, the invention of most of the fine arts was ascribed to the Toltecs, and, at the time of the Conquest, Toltec artisans were considered the masters in practically every art except that of warfare. We may therefore ascribe turquoise mosaic work to the Toltec horizon and field of influence.

In the account of the presents sent by Montezuma to Cortes when the latter made his first landing on the Mexican coast, the first gift listed was "a mask wrought in a mosaic of turquoise; this mask had wrought in the same stones a doubled and twisted snake, the fold of which was the beak of the nose; then the tail was parted from the head, and the head with part of the body came over one eye so that it formed an eyebrow, and the tail with a part of the body went over the other eye, to form the other eyebrow. This mask was inserted on a high and big crown full of rich feathers, long and very beautiful, so that on placing the crown on the head, the mask was placed over the face; it had for a jewel a medallion of gold, round and wide; it was tied with nine strings of precious stones, which, placed around the neck, covered the shoulders and the whole breast."²

¹ Marshall H. Saville, "Turquoise Mosaic Art in Ancient Mexico," Contributions from the Museum of the American Indian, Heye Foundation, vol. VI, New York, 1922. This is the most comprehensive work upon the topic and to it the present writer is indebted for much of the data herein contained.

² Fr. Bernardino de Sahagun, *op. cit.*, li'v. XII, cap. 4.

One of the contemporary historians,¹ in speaking of some of the ornaments which Cortes sent to Spain in 1522, writes: "We also admire the artistically made masks. The superstructure is of wood, covered over with stones, so artistically and perfectly joined together that it is impossible to detect their lines of junction with the fingernail. They seem to the naked eye to be one single stone, of the kind used in making their mirrors. The ears of the mask are of gold, and from one temple to another extend two green lines of emeralds; two other saffron colored lines start from the half-opened mouth, in which bone teeth are visible; in each jaw two natural teeth protrude between the lips. These masks are placed upon the faces of the gods, whenever the sovereign is ill, not to be removed until he either recovers or dies."

The lapidary's art, like that of the goldsmith, is traditionally supposed to have been taught to the Toltecs by their god and culture-hero Quetzalcoatl. At the time of the Conquest the Aztec and Toltec workmen were organized into guilds which had their protecting deities, their ceremonial rites and observances, and their civil duties and privileges. Usually, the father taught his trade to his son, and the craft thus became hereditary.

The historian from whose careful work we derive most of our knowledge of old Mexico, Sahagun, devotes much space to recounting the practices of the lapidaries and goes into far more detail than we have space to copy here. They had four special protective deities which they worshipped in the form of idols. Sahagun describes at considerable length how these figures were carved and ornamented for the annual festival of the lapidaries.² "They said that these gods had invented it [work in precious stones], and for this reason they were honored as gods, and to them the elder artisans of this craft and all the other lapidaries made a festival. By night they intoned their hymns and set the captives who were to die, on watch in their honor, and they did not work during the festival. This (festival) was celebrated in Nochimilco, because they said that the forefathers and ancestors of the lapidaries had come from that town, and there was the place of origin of these artisans."

The forty-six finest known pieces of Mexican turquoise mosaic differ considerably in quality, though all are larger and more ornate than anything known from the American Southwest. In some of

¹ Peter Martyr (Petrus Martyr Anglerius), "De Rebus Oceanicis et Novo Orbe," 1574.

² Sahagun, *op. cit.*, lib. IX, cap. 17.

them the workmanship is exquisite, plates of turquoise of several shades, of lignite, shell and other materials being arranged to form figures and designs. The thin plates, moreover, are cut in rectangular or other rectilinear shapes so that, as the ancient historians report, the joints are close and the interstices practically invisible. The specimens of this fine type are relatively few, however; the greater number consist of polygonal plates of very varied sizes except for the outer line which forms the edge of the figures. The poorer grades are composed of plates of turquoise of very irregular and often curvilinear outlines, the interstices therefore being relatively large and the æsthetic effect poor. Although Sahagun devotes much space to describing the lapidary's method of work, only a few sentences of this refer to turquoise. These are¹ "The stone that they call round turquoise is not very hard, so they have no need of emery to scrape, facet, smoothe, or polish, for they apply to it the bamboo, then it receives its radiant luster and brilliancy. The fine turquoise is not very hard either. They polish it likewise with fine sand and they give to it a very brilliant luster and radiance by the method of another polisher, called the polisher of turquoise."

This MUSEUM possesses but two specimens, or rather one pair of specimens, of turquoise mosaic work, but objects of this technique are so rare, and this pair of such unusual provenience as to render them of special interest.

These objects were secured by the writer in the little village of Azqueltan in the northern part of the state of Jalisco, Mexico, in 1912. I was at that time the student delegate from the University of Pennsylvania to the International School of Mexican Archæology and Ethnology in Mexico City. The School had recently been founded, in the last year of the Diaz regime, and, after a few precarious years of existence under various revolutionary administrations, died a lingering death of malnutrition, but not without hopes of a more glorious resurrection under more stable conditions.

The *aldea* of Azqueltan, an Aztec word meaning "the place of the ants", shelters the remnants of the Tepecano tribe of Indians. At the time of the Conquest they were a large group and occupied much territory in this general region, but the inevitable fate of Indian tribes

¹ Sahagun, *op. cit.* This section is omitted in most editions of Sahagun but was published by Eduard Seler, "L'Orfèverie des Anciens Méxicains et leur Art de Travailler la Pierre et de Faire des Ornaments en Plumes," *Compte rendu de la VIII^{ème} Session du Congrès International des Américanistes*, Paris, pp. 401-452.

has been theirs. They have retreated gradually until today they occupy but this sole village and a few square miles of surrounding territory in the barranca or canyon of the Rio de Bolaños. Their language, however, proves them to be closely related to the Tepehuane tribe farther north, and to the Papago and Pima of the Arizona-Mexican border. They are related also to the Yaqui, Tarahumare and to certain other tribes of northern Mexico, and more distantly to the Aztecs and Toltecs of southern Mexico and the Utes, Paiutes, Comanche, Hopi and certain other Indian groups of the western United States. Their customs, likewise, show connections with all these groups, very close to some, very slight to others.¹

Today the Tepecano Indian of Azqueltan differs very slightly in external appearance from his "civilized" neighbors. A foreigner, passing through the village, would see nothing unusual in the people or their surroundings. For the Tepecanos have adopted the dress and customs of the average Mexican peon, and the latter is, almost everywhere in Mexico, of pure, or nearly pure, Indian blood. The language is seldom used and almost forgotten and the ancient religion is cherished only by the most conservative of the elders.

My primary task while in Azqueltan was to study the language, and this occupied most of my time, but, as opportunity offered, data were collected on religion, folklore, customs, and on the archaeology of the region.

Now the native of Azqueltan is a devout Christian, can recite his "Ave María Purísima" and his "Padre Nuestro" with considerable confidence, and never misses the service on those rare occasions when the reverend padre from the nearest town girds up his and his riding-mule's loins for the jolts of the long downward trail into the barranca.

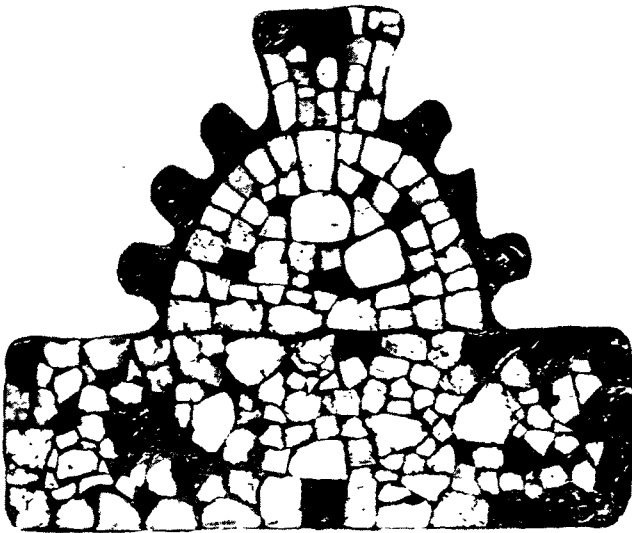
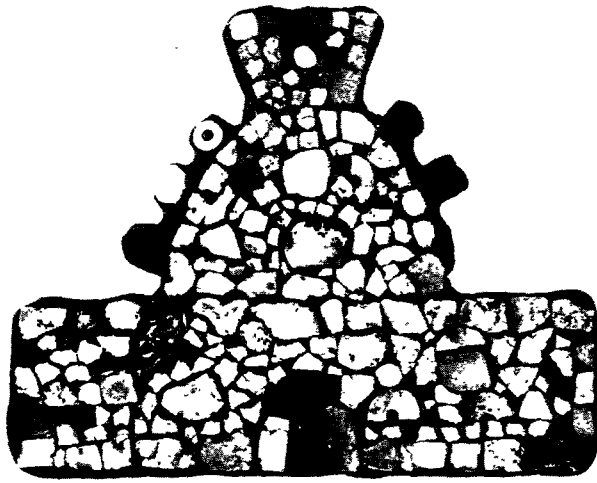
Nevertheless the conservative native sees no confusion in aiding the powers of Heaven to avert evil with the help of his old

¹ Cf. J. Alden Mason, "The Tepehuan Indians of Azqueltán," *Proceedings of the XVIII International Congress of Americanists*, London, 1912, pp. 344-351; "The Fiesta of the Pinole at Azqueltán," *THE MUSEUM JOURNAL*, III, 3, September, 1912, pp. 44-50; "Tepecano, a Piman Language of Western Mexico," *Annals of the New York Academy of Sciences*, Vol. XXV, 1917, pp. 309-416; "Tepecano Prayers," *International Journal of American Linguistics*, Vol. I, pp. 91-153, 1918; "The Chief Singer of the Tepecano" in "American Indian Life," edited by Elsie Clews Parsons, New York, 1922, pp. 203-236; "Four Mexican-Spanish Fairy-tales from Azqueltan, Jalisco," *Journal of American Folklore*, XXV, no. 97, July-September, 1912, pp. 191-198; "Folk-Tales of the Tepecanos," *id.*, XXVII, no. 104, April-June, 1914, pp. 148-210. Aleš Hrdlička: "The Chichimecs and their Ancient Culture with Notes on the Tepecanos and the Ruin of La Quemada," *American Anthropologist*, (n. s.) vol. 5, no. 3, July-September, 1903, pp. 385-440. Carl Lumholtz, "Unknown Mexico," New York, 1902.

pagan ceremonies, and of many powerful little objects or magical fetishes. Each native man has a collection of these sacrosanct objects which he formerly guarded with tender care. The most potent collection, naturally, belongs to the High Priest or Cantador Mayor (Chief Singer) as he is called, and these are solicitously handled and placed on the native altar during the pagan ceremonies, where they exercise a powerful influence for the good of the tribe and aid the gods to prevent, or influence them not to send, evil and misfortune.

These sacred objects consist of anything which the native may find which to him is peculiar or inexplicable, and which may seem to him to represent some natural phenomenon or object. Thus they fall into three classes: natural stones or other objects of peculiar form or color, such as concretions; manufactured objects or fragments of them which some traveler—such as myself—may have lost and which are not recognized by the native as such; and archæological objects. The second class may consist of such objects as glass marbles, cruet-stoppers, and similar relics. The archæological objects are probably recognized by the native as belonging to the “antiguos”, but as they belonged to the mythical age of the Gods, they are the more potent. Each of these charms is identified with whatever natural object or phenomenon it may suggest to the eye of the native, such as the rain, the sun, moon, or morning star, the cardinal points, the altar, the sacred gourds, the fire, the seats, the rainbow.

Under the influence of the Church and of modern life the belief in the powers of these objects has waned among the more sophisticated of the Tepecanos and most of them were ready to dispose of their charms and take their chances of the ire of the ancient deities—for a sufficient compensation; and in a country where a chicken could be secured for ten cents and a day's labour for twenty-five, even the high cost of silencing the qualms of conscience was not utterly beyond the limits of an archæologist's exchequer. And even should an old conservative native's wants be so few that he could not be induced to part with his treasure, he not infrequently had younger relations who would risk the chance of his ire and his excommunicatory powers by quietly appropriating and disposing of his fetishes. It was in this latter way, let me confess with slight contrition, that I secured the turquoise mosaics that are the topics of this discussion.



Ear Pendants of Turquoise Mosaic from Jalisco, Mexico

They were brought to me by a young native, the grandson of one of the patriarchs of the village whose office of mayordomo or sexton of the little church apparently did not conflict in the least, in his mind, with that of "Guardian of the Fire" at the native pagan ceremonies. I bought them, of course, but he could tell nothing of their finding or purpose. A few days later I was looking over my collection and found them missing. The only man I could suspect was old Francisco who, as mayordomo of the church, had the entree to the pastor's *curatorio* which I occupied. Inquiries availed nothing and I decided that the objects really belonged to the old man and that he had but reclaimed his property. I had to leave without them.

The following winter I returned for further studies and kept in mind the recovery of these specimens. Casually I remarked to Francisco's son my regret at the loss of them and, naming some of the village rowdies as possible suspects, suggested that he get them back for me. Then I quoted a price which I knew would be irresistible to him, something like a dollar each, and the next day they were brought to me. I asked no questions.

These mosaics, which are shown in full size and exact colours on page 171, are of a workmanship inferior to the Mexican pieces and even to most of the ancient pieces from Arizona and New Mexico, probably resembling most the modern or recent turquoise mosaic ear-ornaments from the Hopi and Zuñi. In form, however, the latter are rectangular, while these are less simple in outline. They may not have been used together, since one is three-sixteenths of an inch longer and of better workmanship than the other. This larger specimen measures two and eleven-sixteenths inches (6.9 cm.) by two and three-sixteenths inches (5.5 cm.) in height, and averages five thirty-seconds of an inch (4 mm.) in thickness. The pendants are thus extremely light, the larger one weighing only 166 grains or about three-eighths of an ounce. In shape, general appearance and in most details, however, they are identical.

No wood was employed, the entire matrix being apparently of a brown resin, probably from the pine tree. In this region the pine is known as *ocote*, from its Aztec name *ocoli*, but it is probably very similar to the piñon of Arizona, the gum of which is used in that region for turquoise mosaics.

The greater part of the face of both specimens is composed of this brown resin into which the small, thin plates of turquoise were

set while the resin was soft. Relatively few of these pieces of turquoise were artificially shaped and most of them, apparently, are irregular small fragments, possibly refuse from the workshop. Along the edges the best pieces with at least one straight edge were placed, and in the center of the better specimen an attempt to maintain some regularity was made, but for the greater part the turquoise bits were poorly selected and poorly spaced, little attempt having been made to fit the pieces closely together, and the interstices and unfilled spaces being obvious. In some of these bare spaces the piece of turquoise has fallen out, but others were never filled. In several cases, especially in the smaller and poorer specimen, parts of broken drilled beads were utilized. The same feature is noticeable in the ancient mosaic ear-ornaments from Hawikuh, which are not over half the size of the Tepecano specimens in either direction, and mounted upon a wooden base.

The back and thin edges of the pendants are covered with a layer, normally thin but in some places rather thick, of a jet black substance, evidently a pitch of some sort, and resembling the brown resin in everything but colour. It was obviously applied over the brown resin while soft. On the front side it shows on the surface in two places. In the middle line at the bottom edge a rectangular niche was left by the careful placing of three straight-sided plates of turquoise, and in this place a hemispherical nodule of this pitch was placed. This probably has some esoteric ceremonial significance, which will probably remain unknown, at least until the archæology of this region is better known than at present. On the six spurs which project laterally the black pitch also forms the surface, and into this pitch were originally impressed small drilled discoidal turquoise beads. Practically all of these have fallen out but the impressions of most of them on the pitch remain. A suspension hole is seen at the top of each specimen, probably perforated while the resin was soft.

What were these objects used for, what significance had they and whence did they come?

Although I know nothing resembling them in shape, there can be little doubt that they were ear pendants. The suspension holes at the top indicate that they were pendants of some sort, and their closest resemblance is to the smaller rectangular ear pendants of the Hopi and Zuñi. Their light weight made them very suitable for this purpose and, furthermore, the Tepecanos considered them as such.

The shape doubtless has an exact ceremonial significance, but not enough is known of the archaeology and religious symbolism of northern Mexico to permit an acceptable explanation. It is quite possible that it is meant to represent or signify the sun appearing above the horizon and casting its first rays abroad. Probably a deep study of the symbolism of the religions of the Pueblo Indians and of the ancient Aztecs would throw some light on the question. The black bead in the bottom at the center also undoubtedly has some definite esoteric meaning.

I feel certain that the colours employed also have definite significance. Colour symbolism is of great importance in the religions of all the peoples of the Southwest from the Navaho and the Pueblo peoples through Mexico down to the Aztecs themselves. Practically every ceremonial object or phenomenon and every god has his appropriate colour, but of especial importance is the relationship between the cardinal points and certain colours. The sacred ceremonial number also has an intimate relationship with these. This is generally four, five, or six, depending on whether the people consider the zenith and the nadir also as cardinal points. The colours, naturally, are always those known in nature which can be reproduced by native dyes. Green or blue, red, yellow or brown, black and white are the most common. The exact colour ascribed to each point differs greatly from tribe to tribe; the system employed by the Tepecanos is green-blue for the east, drab brown or gray for the north, black for the west and white for the south. The exact tints are generally very difficult to determine in those cases when, as in the case of the Tepecanos, they have not sufficient knowledge of Spanish to explain perfectly and have lost the art of making native dyes. Throughout this region the Indians make no distinction between green and blue, including both under one term, and I believe that the tint thus designated is that of the turquoise and of certain types of jade, that the colour was chosen for this reason and turquoise and jade so highly prized largely on account of this connection. The drab colour of the north, most often translated by Spanish *pardo*, is perfectly represented by the colour of the brown resin and the black of the west by the pitch. The white of the south seems to be unrepresented.

Finally as to their original provenience. Ear ornaments of turquoise mosaic were certainly worn by the Aztecs, for specimens of them, known as *guariques*, were sent by Cortes to Spain, but

none has been preserved and we know nothing of their shape. Judging from the extant specimens of Mexican turquoise mosaic work, however, they must have been of a workmanship superior to that of our specimens. In the Pueblo region, ear ornaments of turquoise mosaic work are known both from ancient sites and from the present peoples, but these are smaller, rectangular, and made upon a wooden base. It is most probable, therefore, that in former days such objects were used throughout the intervening region, the archæology of which is but slightly known. Consequently, the most likely probability in every such case, that an object was made in the region in which it was found, does not conflict with what is known of the distribution of this type of object, and we may reasonably conclude that the mosaics were the product of the handicraft of one of the ancient peoples of the northern Mexican region.

ZAPOTEC FUNERARY URNS FROM MEXICO

BY J. ALDEN MASON

THE average layman knows of but two great native civilizations in America, those of the Aztecs and of the Incas. This is, of course, because his reading upon this subject has been limited to Prescott's entrancing histories of the conquests of these two empires. Even the magnificent Maya culture, the highest of all, is but little known to him. However, from central Mexico to northern Chile and Argentina existed other high civilizations, most often related culturally to the two great nations, some of them vassals of the Aztec or Inca empires, but generally quite different in language and divergent in culture. And before all of these, earlier nations and cultures had existed which left the record of their progress beneath the soil.

One of these lesser cultures was that of the Zapotec in the State of Oaxaca in southern Mexico. Entirely different from the Aztec and their predecessors, the Toltec, in language and in most phases of culture, they existed as an independent nation until about the year 1495, when they were conquered and became subject to the Aztec empire.

Their territory lying in southern Mexico, between the two great centers of culture, that of the Toltec in the Valley of Mexico and that of the Maya in Guatemala and Yucatan, the Zapotec could not have escaped absorbing cultural elements of both of these nations, and their civilization attained a high grade. Their work in gold, copper, jade, stone and pottery was among the best in Mexico, their pyramids and other structures were immense and imposing, and they possessed a system of writing, or at any rate of recording calendrical dates. On the whole, their civilization was somewhat closer to that of the Maya than to that of the Toltec and Aztec.

The most typical Zapotec objects are the funerary urns of pottery which were buried in or around tombs. These tombs are in themselves admirable structures, generally consisting of a chamber with walls and roof of stone and adobe, cement floor and a doorway with a great stone lintel, all carefully carved and faced. In these

were laid the bodies of the illustrious dead, and usually a great mound of earth was heaped over the tombs, these mounds being today known as *mogotes*.

The funerary urns found with these tombs were never placed in the chamber itself, but generally above the lintel of the door, on the roof, on the floor in front of the door, fastened in the façade, placed in niches over the door, or in other similar places. They are generally found in groups of five. Though they almost invariably possess a cylindrical cavity, the purpose of which must have been to contain some material, yet they are always found empty and no clue as to their use is known. It is possible that they contained water for the dead; on the other hand, religious conservatism might have caused the continuation of their form long after their utilitarian employment had been discontinued and their purpose forgotten.

The urns are very typical and unmistakable, both as regards form and ornament. They are always made of a dark, heavy, hard and rather thick pottery, unpainted except for washes of color in places, and generally covered with a thin slip of stucco. Always ornate and exotic in appearance they are frequently large as well.

By far the greater number of these urns consists of human figures with very ornate decorations, especially in the headdresses. They are generally shown as seated, less often standing. Animal figures are rare, although anthropomorphic figures with animal heads are not infrequent, but animal figures with human heads seem to be never found. Apparently the faces and the low relief ornamentation were generally made in moulds.

The UNIVERSITY MUSEUM now possesses about forty of these urns, the majority of them forming part of a large collection recently acquired by purchase. Eleven of the finest and most unusual are shown on these pages. They are of exceptional quality and therefore cannot be said to be representative of the average Zapotec urn, nor of those in the MUSEUM's collection. The most typical of these is that shown on page 195. The common type of urn consists of a human figure sitting crosslegged with the large hands resting on the knees; the legs and feet are somewhat conventionalized. The body is clothed and ornately decorated with an elaborate headdress, breast ornament, and great discoidal ear ornaments. The face is naturalistic, sometimes so much so that it is believed that many of the urns are portraits of the deceased, but frequently the human face is obscured by a great mask covering the nose and frequently

the mouth and eyes. The nose of the mask is generally very large and protruding, the eyes often rectangular. Analogies between the characteristics of the mask and those of certain Mexican and Mayan gods can often be traced. The back of the figure is generally composed of a cylindrical vase, the round mouth being at the level of the neck, but in some cases the head itself is cylindrical with the orifice at the top.

Animal figures such as those shown on pages 181 and 183 are practically unique, and standing figures such as those on pages 185, 187 and 189 extremely rare. Figures on pyramids such as that on page 193 are unusual, as are those on bases like that on page 191. The remarkably pictorial head and the animal headcovering of the urn shown on page 199 are quite unique, and the bodyless type such as that on page 201 is out of the ordinary. Most of these, moreover, are of unusual size and degree of ornamentation. None of them, however, shows the elaborate face mask which is characteristic of many of these urns.

While many of the urns in the MUSEUM collection are of the most typical class, a few others not shown in this article deserve special mention. In two instances, the figures are seated on a raised support, the lower legs being vertical. In all such cases where the legs are shown thus, the feet are carefully moulded and the sandal cords may be seen; this is not the case with the cross-legged figures. Another figure is seated on a high box base and another on a square base, both with feet flat on the ground. One very naturalistic figure with little ornamentation and no headdress or breast ornament sits cross-legged on the ground, a small opening in the top of the head taking the place of the ordinary posterior cylindrical vase. Another unique small figure wears a most ornate mask with bits of copper in the eyes, and behind the usual vase is a small altar or niche.

THE POTTERY URNS

COMPOSITE BAT-DOG FIGURE

This and the companion figure shown on the following plate are probably the most remarkable pottery figures ever found in the Zapotec region. Only one other pair of the type is known, and these are much smaller and are said to have been found at a place near that where those here described were discovered.

The head with its great ears, peculiar nose, teeth and facial expression, mane and beard and the large belly with prominent navel are very bat-like in character. The limbs and claws are those of another animal. The posture is dog-like, as are the toes, and it is altogether likely that this animal was intended to be represented. The Indians who found these specimens considered them as the "Messenger Dogs of the Gods", the larger male, the smaller female.

Both of these animal figures were found in a cave temple facing each other near a niche for the figure of the principal deity, which figure was missing. A landslide had covered the entrance to the cave, the existence of which was known only by the oral tradition of the Indians of the surrounding region.

Found at Guilá, Oaxaca, Mexico. Height $19\frac{1}{2}$ inches.



COMPOSITE ANIMAL FIGURE

The companion piece to the preceding, most of the comments upon which also apply to this.

The Bat God was one of the important deities of the Maya, many elements of whose religion were shared also by the Zapotec. The Bat God in particular is known to have been revered also by the Zapotec, but was not recognized by the Toltec and Aztec of the Valley of Mexico. He was especially associated, among the Maya at least, with the underworld, and with worship of, and in, caves. It is, therefore, quite natural that bat figures should be encountered in a cave temple. The dog, among the Maya, was considered to be connected with death, and to be the messenger to prepare the way to the hereafter.

These figures are of thick black pottery with hollow interiors. A thin layer of stucco, traces of which still remain, covered the surface. In the back of the neck a large oval orifice affords access to the interior which was probably used for holding some substance as in the case of the usual human figures. The tail is represented by a small semicircular raised ridge along the base of the spine.

Found at Guilá, Oaxaca, Mexico. Height $17\frac{1}{2}$ inches.

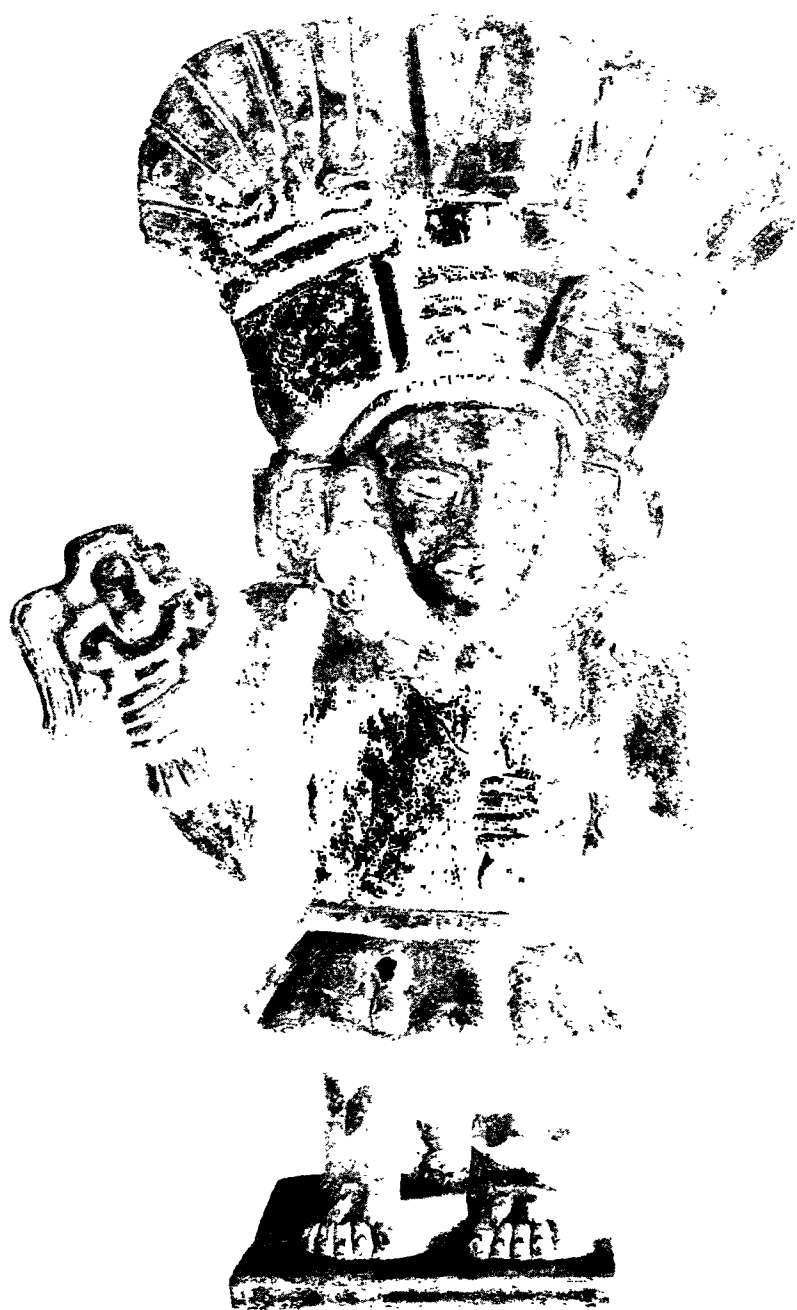


STANDING HUMAN FIGURE

A figure of very unusual type, standing upon a rectangular plaque with a supporting brace behind. The material is thick black pottery over which remain traces of a covering of stucco. The hollow body ends with a large oval orifice at the shoulders, above which the head and headdress tower.

The flaring hem of the garment and the ruff around the leg, probably representing the bottom of a leg covering, one of which is missing, are unusual features as are the objects held in the hands. That in the left hand probably represents a weapon or baton, that in the right some esoteric ceremonial object, the nature of which is obscure. The thongs between the toes which bound on the sandals are well portrayed. The omnipresent great discoidal ear ornaments, probably representing obsidian, and the bead necklace, the original probably of jade, are very typical, but the nose pendant, which was presumably of gold, is unusual. The great headdress, the original of which was doubtless made largely of feathers, is less ornate than usual, the eccentric relief face probably representing the owl.

Found in the State of Oaxaca, Mexico. Height 22 inches.



STANDING HUMAN FIGURE

This unusual figure is doubtless a companion piece to the preceding and, with the exception that it lacks the nose pendant and possesses a headdress of different type, the description of the last figure suits this equally well. The objects held in the hands differ only in detail, and are similarly unidentifiable.

The great headdress undoubtedly represents a very conventionalized animal face, the human head appearing beneath the upper jaw, the lower jaw not shown. The artistic concept of a human head framed in an animal's mouth was a favorite one in Mexico and among the Maya, and numerous examples are known, the jaguar's, eagle's and snake's mouth being the most common. The elongated jaw, the palatal ridges and the merciless eyes in the present instance seem to point to an identification with a crocodile. It appears to be one of the peculiar characteristics of Mexican representations of the crocodile that the lower jaw is never shown.

Found at Tenexpa, Oaxaca, Mexico. Height 21 inches.



STANDING HUMAN FIGURE

This figure is very similar to the two preceding in general concept, but divergent in many details. The facial expression is very unusual and untypical of Mexican art.

The plaque on which the figure stands is curvilinear instead of rectangular. Although the leg ruffs and the sandal cords are the same as in the preceding figures, the short skirt—or it may be the bottom of a long blouse—is replaced by three other articles of apparel; that to the front is obviously the pendent end of a breech-cloth, those to the sides may be armor pads. The arms are in the same position as in the two preceding figures. The right hand grasps an object of a type similar to those of the preceding figures, but differing in shape; the low relief profile head of a bird, probably an eagle, is an important element in this object. The left hand holds a shield from which hang ornamental tassels. The asymmetrical headdress and the shoulder ornament doubtless represent feathered plumes.

Found in the State of Oaxaca, Mexico. Height 22 inches.



HUMAN FIGURE SEATED UPON A BASE

The square base upon which this figure is seated, the sandals and the leg ruffs and cord place it in the same class of unusual figures as the preceding standing ones. Otherwise it conforms more to the common type of Zapotec urns. One hand rests on the knee in the usual position, the other grasps an object, probably a weapon, carved in the form of a fish. The great discoidal ear ornaments, the elaborate headdress and the pendent breast ornament suspended upon a cord, all of them doubtless of exaggerated size, are characteristic of the more typical urns. Traces of red and white wash are evident.

Found at Zaachila, Oaxaca, Mexico. Height 13 inches.



FIGURE SEATED UPON A PYRAMID

Representations of persons, generally deities, seated upon pyramids, are common in Mexican art. Since the temples in which the gods were worshipped were almost always placed upon truncated pyramids, it is but natural that the small figures of the deity should also often be shown in this position. In this example the steps leading up the front of the pyramid are shown, flanked by conventionalized low relief profile eagle heads and other symbols. The same motifs, without the stairs and with the flanking elements more extended to take the place of the staircase, are shown to the sides of the pyramid, the back being plain. In type of ornamentation and form, this pyramid most resembles the beautiful structure at Xochicalco, near Cuernavaca, Morelos, which, although outside of the Zapotec region, is recognized as showing a blend of Zapotec and of Toltec art.

The figure is seated, cross-legged, in the usual Zapotec style, with the left hand on the knee; the right hand holds a double-bladed axe, probably a weapon. The free front end of the brecchcloth, the great discoidal ear ornaments and the breast pendant suspended on a cord are typical of these figures, but the nose plug and the closed eyes are unusual. The headdress, probably representing one composed mainly of flowing plumes, is elaborate but typical, but the great circular background is unique.

The pyramid is covered with a wash of brick red, while a thin wash of white stucco covers most of the figure.

Found in a tomb in the State of Oaxaca, Mexico. Height 18½ inches.



SEATED FUNERARY URN

Although rather more ornate and less exotic than most Zapotec funerary urns, this figure is the most typical of that class of all those here shown. The rather conventionalized crossed legs with the large hands resting on the knees, the elaborate headdress, the large ear ornaments and the great breast ornament suspended on a twisted cord are all frequent elements in this art. The large head and neck decorations, the originals of which were doubtless composed mainly of feather plumes, are impressive, the central figure of them representing the bust of a smaller human figure which wears a mask.

Traces of light red and stucco slips remain on the pottery.

Found in a tomb beyond Miahuatlan, Oaxaca, Mexico.
Height 15 inches.



SEATED FIGURE HOLDING BOWL

Except for the bowl which this figure holds before him, a very unusual feature, this specimen typifies best of all the vases shown here the usual Zapotec funerary urn, and displays well the great nose ornament which is frequently found. The position of the legs, the flap of the breech-cloth, the ear ornaments, and the branching headdress are all very typical.

The motif of a human figure holding a bowl before him, which doubtless represents an offering or libation, either as received by the god or offered by the suppliant, is one of wide-spread occurrence in America, being found at least from Mexico to northern Argentina. Nose ornaments in the form of plugs, rings or pendants are also a common element in aboriginal America and extended through the same region. Many of the primitive peoples of South America today wear nose plugs.

Little or no stucco covering is seen on this urn.

Found in a tomb in the district of Etla, Oaxaca, Mexico.
Height 16 inches.



SENILE FIGURE WITH PECCARY HEAD

This small figurine urn is in many respects the most interesting of all here shown and decidedly variant from the usual type of Zapotec vase. The material, the general form, and the position of the legs, hands and breech-cloth, however, leave no doubt as to its origin. Smaller and far less ornate than most, it belongs to the class that is considered as pictorial rather than as representative of deities.

The face is that of an old but active man with wrinkled face and few teeth. Upon his head, in lieu of the usual ornate plumed headdress, he bears an animal's head which probably represents the peccary. What significance this may have had is problematical. The great ear disks are broken but behind them were large tooth-shaped pendants, one of these also now missing. The necklace of jade beads with the central medallion are common elements, but the short cape covering only the shoulders is unusual. The cylindrical cup which is seen behind is not, as usual, a part of the body, but practically separate and proportionately larger than is normally the case.

Traces of a red wash are visible on the ears and mouth of both human figure and animal head, a light stucco slip over the rest.

Found in a mound tomb at Miahuatlan, Oaxaca, Mexico. Height 11 inches.



LARGE BODYLESS FIGURINE URN

This specimen is the most variant of all those here shown. From the neck up it is of typical Zapotec art, showing the elaborate headdress which was probably composed largely of feather plumes with possibly gold, copper and jade ornaments, the ear disks and the suspended breast ornament. The lower part of the figure, however, is missing and replaced by an oval spreading hollow foot. Behind the ornamental front, the oval vase flares out again above the base, making a vessel of hour-glass or wheat-sheaf shape, with the septum at about the level of the eyes of the human face. The relief ornament above the face resembles a conventionalization of a flying large-billed bird, but this interpretation may be entirely subjective.

The entire vase is covered with a rather thick stucco slip.

Found in a mound tomb at Huitzo, Oaxaca, Mexico. Height 16 inches.



THE DIRECTOR OF THE MUSEUM

IN the March number of THE MUSEUM JOURNAL announcement was made of the appointment of MR. HORACE H. F. JAYNE to the position of Adviser in Far Eastern Art. The Board of Managers now has pleasure in announcing the appointment of Mr. Jayne to the Directorship of the Museum.

Mr. Jayne was graduated from Harvard in 1919 and after spending some time studying in this country and abroad, became associated with the Pennsylvania Museum, where, in 1921, he was appointed Chief of the Division of Far Eastern Art, a post which, in addition to that of Director of the Museum, he continues to hold. Mr. Jayne was a member of the first Chinese archaeological expedition conducted by the Fogg Museum at Harvard University, this expedition covering Western China and Mongolia, and he was joint leader of the second Fogg Expedition which centered its activities in the Gobi Desert and Chinese Turkestan. Mr. Jayne, with Mr. Langdon Warner, is Editor of *Eastern Art*.

MUSEUM NOTES

APPOINTMENTS

At the April meeting of the Board of Managers Mr. Charles Day, Mr. Eli Kirk Price, Mr. John Frederick Lewis and Mr. Joseph E. Widener were elected Managers of the Museum.

At the same meeting Mr. Edgar B. Howard was appointed Associate in American Archæology and Mr. and Mrs. Edward Austin Waters, Field Representatives in Central Asia.

Mr. Paul Beidler, of the School of the Fine Arts, has been appointed architect on the Museum's Egyptian Expedition and will join Mr. Rowe at Medum in the early fall.

EXPEDITIONS

The announcement is made in this number of the *JOURNAL* of the Museum's plan to resume archæological work in Egypt during the coming autumn under the direction of Mr. Alan Rowe, who for the past four years has been leader of our expedition at Beisan, where work will be temporarily suspended. The Museum's Palestinian excavations have yielded rich material for the early history of that country and their success has been attested to in a gratifying manner in the following abstract taken from the April number of the *Quarterly Statement* of the Palestine Exploration Fund.

"We are indebted to Mr. Alan Rowe, the Director of the excavations at Beth-shan, for placing at the disposal of the Fund one of the most remarkable and valuable contributions to the religion and archæology of Ancient Palestine that have been made for many years. The American excavations have been conspicuously successful and illuminating. They have been of a sort the value and interest of which could be immediately seen. Not all excavations have had so much that is both spectacular and important to show; some—like those conducted by the Fund of Ophel, for example—produce solid and objective results that are less impressive to the ordinary eye. We congratulate the Museum of the University of Pennsylvania both upon the work they have achieved, and upon the generous and public-spirited manner in which they have made the results of their excavations so quickly and so widely accessible."

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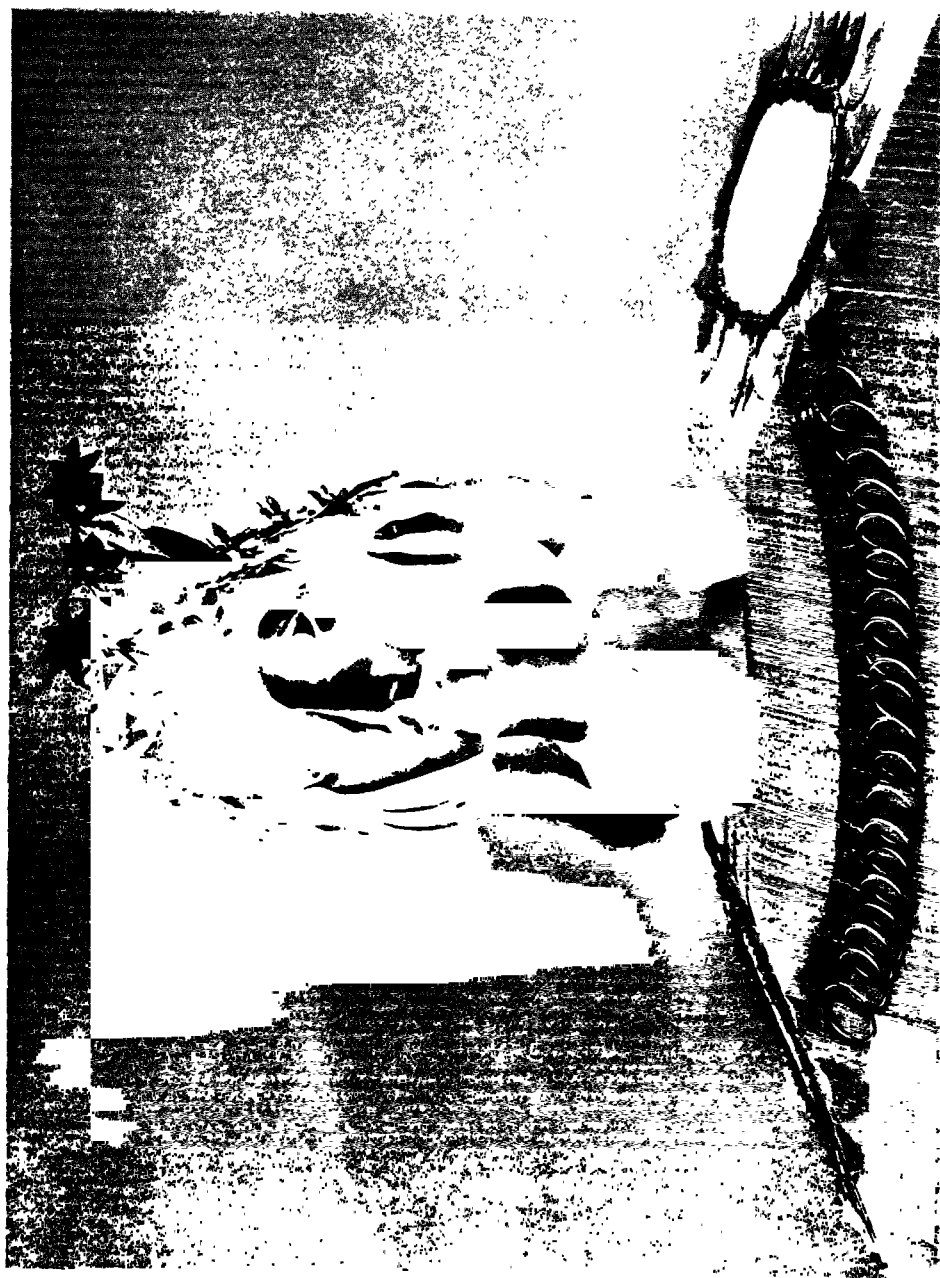
THE KAGUANTON SHARK HELMET PAGE 339

ANNOUNCEMENT

Beginning with Volume XXI, an alteration will be made in the scope of the *Museum Journal*. Hitherto, an effort has been made to combine in these pages the popular and the purely scientific. With the feeling that the latter aim has generally been sacrificed to the former, the editor has now determined in addition to the *Journal*, to issue *The University Museum Bulletin*, published monthly from November to May, which will include short accounts of the current excavations, descriptions of recent acquisitions to the collections, and the activities of the Museum that are of general interest.

The *Museum Journal* will henceforward contain only articles of definite scientific importance. It will be issued, as before, four times a year, but it should be noted that each subsequent part will contain articles dealing only with a single field of investigation, such as Babylonian or Egyptian, or North American Archaeology, or Chinese, African, Mayan or Polynesian Art, so that in each issue there will be a concentration of interest that will, it is believed, heighten its particular appeal.

Subscription to the eight issues of the *Bulletin* will be two dollars. The subscription to the quarterly *Museum Journal* will remain the same per annum, that is, three dollars, but the privilege is extended to those whose interest centres about a particular field to subscribe to four parts for the same sum of money, treating of their particular field as these appear; while it is not guaranteed that these will appear regularly or in sequence, it will be a definite endeavour to have the various fields duly represented. The *Journal* will be sent only to those of higher membership in the Museum; the *Bulletin* will, however, be sent to all members of the Museum, and, it is hoped, a fuller appreciation of the scope and activities of the Museum will thus be established.



Queen Shubad's headress, reconstructed at the University Museum.

THE MUSEUM JOURNAL

Vol. XX

SEPTEMBER—DECEMBER, 1929

Nos. 3 and 4

THE BOUDOIR OF QUEEN SHUBAD

By L. LEGRAIN

QUEEN SHUBAD was so fond of her jewels that when she died in ancient Ur, six thousand years ago, they buried her in queenly state with all her regalia, so that her spirit might have rest. After so many centuries this treasure of feminine adornment is still a delight to the eyes. Her golden comb, her wreaths and diadem, earrings and necklaces, amulets and garters, finger rings, pins and seals, the silver box with black stibium paint for her eyebrows, her golden cockle shells and the golden chalice full of the purple-blue of turquoise for her eyelids, the thirteen yards of golden ribbon wound about her hair, the stiletto, the tweezers, the ear-spoon, the dainty implements of her vanity case, make us wonder at the richness of the material, the skill of the workmanship, and the good taste of the objects once spread ready for the royal hand in the queen's boudoir and today displayed in a freshly decorated room of the Museum, where we can satisfy our curiosity.

We like to think that the queen was a brunette with a mass of dark hair, which, alas, has long turned to dust in the grave. Her skull, irremediably damaged by long exposure in a clay soil, was found collapsed on the bier. Only the gold ribbons wound in a gentle spiral about her head retained their position and to a certain extent outline her coiffure. We wonder what she looked like in the days of her splendour, whether she wore a wig, or her natural hair dressed after the fashion of the time; and what were the fashions for ladies of quality at the court of Sumerian Ur in 3500 B.C.

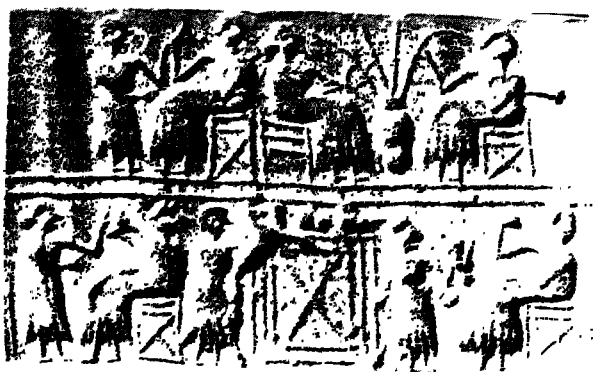
Fortunately we have more than one clue for solving such important questions. Among the best are the scenes engraved on her three blue lapis seals (Plate I), found lying with three gold pins on her right shoulder. Pins and seals served to attach her shawl



A



B



C

The three lapis seals of Queen Shubad.

after the manner of the fibulæ of more recent classical times. The largest seal (B) has given us her name inscribed in cuneiform characters: Shubad the Queen. The surface of the seal is divided into two registers. In the upper, the queen herself is seated on an elegant throne, and is attended by two servants. In her left hand she raises a cup, perhaps the fluted tumbler or the small oval bowl of gold found in her grave. A servant has filled it with wine poured from a silver jug. Opposite, on a throne of equal elegance, sits a male figure, who like the queen raises his cup before drinking. He is a person of importance. A servant attends him, jug and fan in hand, a lively touch of oriental luxury. He is probably the king and the high priest of the local god. His hair is short and his servants' heads are entirely shaven, but the queen wears her hair tied in a heavy roll on the neck.

The same scene is represented on the first seal Pl. I (A). The same servant holding a fan like a flag, of a type still used in the East, and a bowl hanging from a rope handle stands behind the king. Again the king wears his hair short and the queen a heavy roll tied and resting behind on her neck.

An interesting variant of the drinking scene is found on the third seal (C). Both the queen and her partner are using a reed, or long thin tube, to draw the liquid from the jar placed on a support between them. The beverage was probably a kind of beer, a fermented liquid with froth on the surface. Strainers of gold, silver, copper, or clay, show that the filtering of brews or mixtures was as common in that venerable antiquity as today. Four tubes rise from the vessel full of choice drink, two of which are for the king and queen, while two are destined for the other participants in what may be a ritual symposium. Four tubes of rich bejewelled material were found in the queen's grave. One is a reed covered with thin gold, the others are of copper, plated with gold or covered with lapis, or with gold and lapis sections in alternating lengths. The pipes are three or four feet long with a short mouthpiece four to six inches in length, bent at right angles. A third person seated apart and attended by a servant raises a cup to his lips in the usual manner. The queen again wears her hair in a roll on the neck, while her companions are men with shaven heads.

A joyous banquet, the counterpart of the ritual symposium, is represented in the lower register of the three seals. A remarkable sideboard laden with bread, cups of wine, and pieces of meat, choice

PLATE II



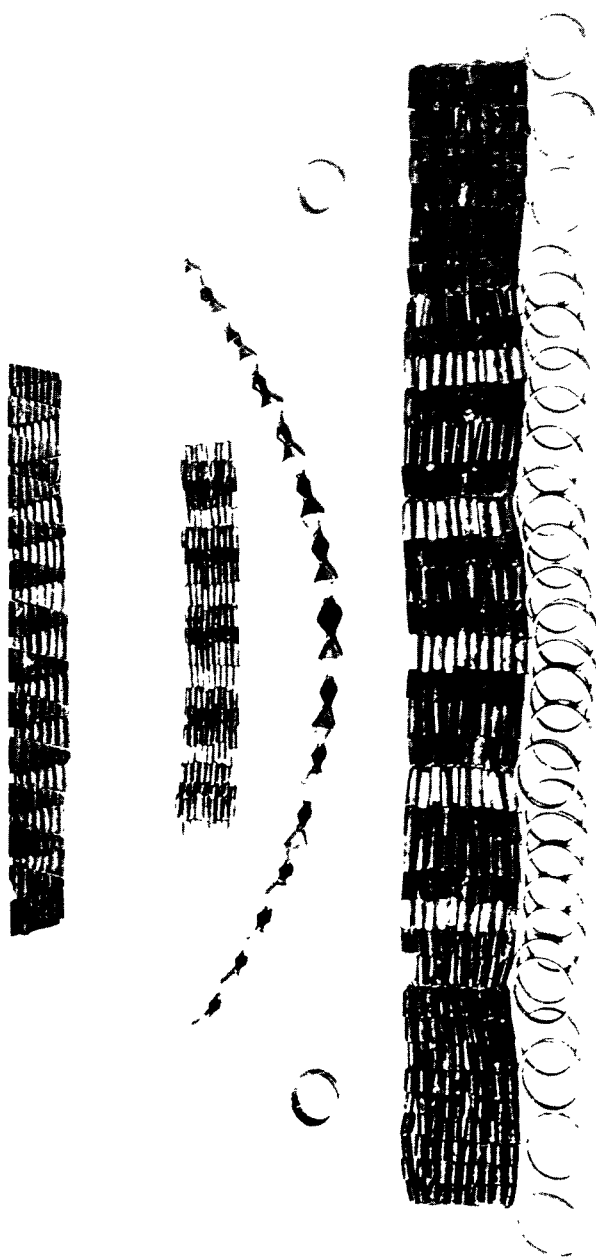
Queen Shubad's headress as reconstructed in the University Museum.

morsels, heads or legs, is the centre of the picture. Servants bustle about. The sideboard is a movable piece of furniture, like the one carried by the dog-butcher in one of the scenes decorating the king's harp, a frame reinforced by crosspieces as on a throne or a chair. The queen's sideboard rests on four elegant bull's legs, probably of copper. In a religious ceremony the sideboard would be called an offering table. This Sumerian cane altar is found only on archaic seals of this time, so that it belongs only to the splendid period represented by the royal graves. It is replaced by a small altar with a ledge when new customs, perhaps new racial traditions, prevailed in the land.

On the seal bearing her name, the queen is not seated at the banquet, but the king, attended by a servant carrying jar and saucer, enjoys his cup with another companion. Both are shaven. On the second seal the queen is enjoying a little feast of her own, with music. She has called for her maids, her harp player, and her two singers. One brings a cup and a footed jar hanging from a rope handle. The harp player stands to play. His small semi-circular instrument has four strings and a metal knob. The singers clap their hands in cadence. The queen is faithful to her style of hairdressing.

On the third seal the king and queen are amicably seated at the same banquet, the queen with her heavy roll of hair tied behind while the king's head is closely shaven. Sometimes the king wore a wig, sometimes even an artificial beard. Such a wig was the splendid golden one of Meskalamdug, which he assumed on solemn occasions and when he went to war. But in private life the king and his men showed their bald heads, a sensible custom in a hot climate. What a relief for him to take off his wig and enjoy a cup of wine in a cool, darkened room. Flints and copper razors by the dozen have been found in many tombs. The shaving of head and chin was not limited to the priestly or to the servant class. The king is attended by his cupbearer holding jug and saucer.

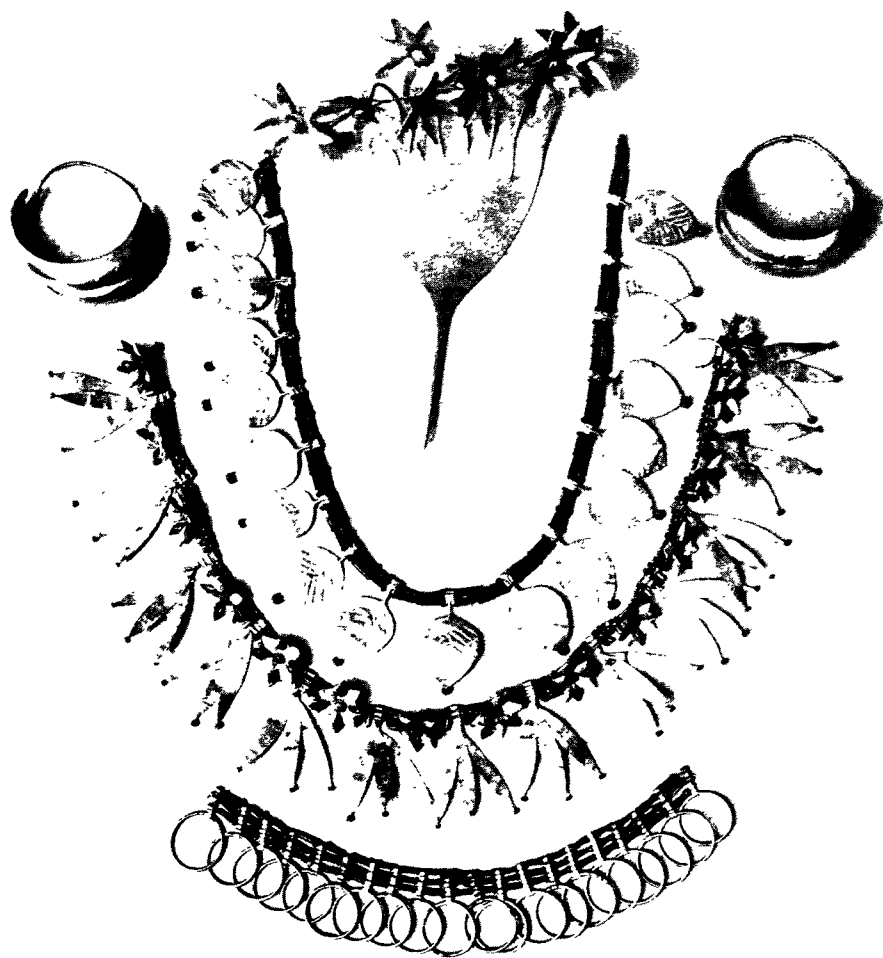
All three seals show the queen wearing her hair tied in a roll behind. Drinking a cup, seated at a banquet, listening to music or watching the dancers, she seems in a most human mood, enjoying the quiet evening hours. The scene is taken from private life, with nothing of the solemnity and religious meaning common on later seals. There are no shrines, no gods, no emblems in the field, no libations, no services of offering. The queen does not even wear the



Queen Shitai's Jewels. Chokers of gold and lapis triangles.
Choker and belt of gold, lapis and carnelian beads. Heavy gold rings form a fringe below the belt.

glorious golden crown and diadem or the golden comb which were deposited with her in the grave. At least the engraver did not try to represent them and was satisfied with the plain gold band which ties her hair. Nor does he place on her head that remarkable horned crown, the regular attribute of Babylonian gods of later centuries. Instead of a mitre we have the simple plain headdress; instead of libation and votive offerings, the joy of a cup and a solid banquet. In short, the worship of the gods after the fashion of a court and their anthropomorphic representation as kings and queens seated on thrones are not yet an institution. All scenes are borrowed from ordinary life and have a primitive simplicity void of all symbolism. The animals are real animals drawn by artists with the keen eye of a hunter for the graceful or terrible beasts of the field, like the lion, deer, and goat on the seal of King Lugalshagpadda.

But even the naïve charm of these banquets and drinking scenes is not without a deeper meaning. The milking scene of Al'Ubaïd with its graphic details of cows and calves, pots and jars, the straining of the cream and the storing of the buttermilk, cannot be understood apart from the shrine of Ninkhursag, the mother goddess, protector of herds and pasture land. The kings and queens of Ur were high priests and high priestesses of the Moon God. Sisters and daughters of kings from Sargon to Nabonidus kept up the venerable tradition, and were thought to be the living personification on earth of the Moon Goddess. The banquet of the queen and her symposium have a ritual solemnity of their own, which gives full value to the rich equipment of gold and silver cups, drinking tubes, lamps, and jewels, and to her complete silver outfit of table, tumblers, jars, bowls, strainers, and wineskin. Raising a cup of wine is a rite which survives strangely in our modern toasts. It is a part of all libation services, the elevation of the holy grail. The sideboard laden with food and drink easily becomes an altar. The same cakes, pieces of meat, and cup of wine are deposited on the ledge altar in front of the divinity. But the scene, when the cane table disappears, takes on a more precise ritual meaning. The ledge altar of stone or clay is placed between the seated goddess and the priest. The goddess wears the horned crown, henceforth the indispensable attribute of divinity. The priest pours a libation into the cup. There is a crescent emblem in the sky. An assistant goddess in the background lifts her two hands, praying. The scene has become stereotyped and official. When and by whom

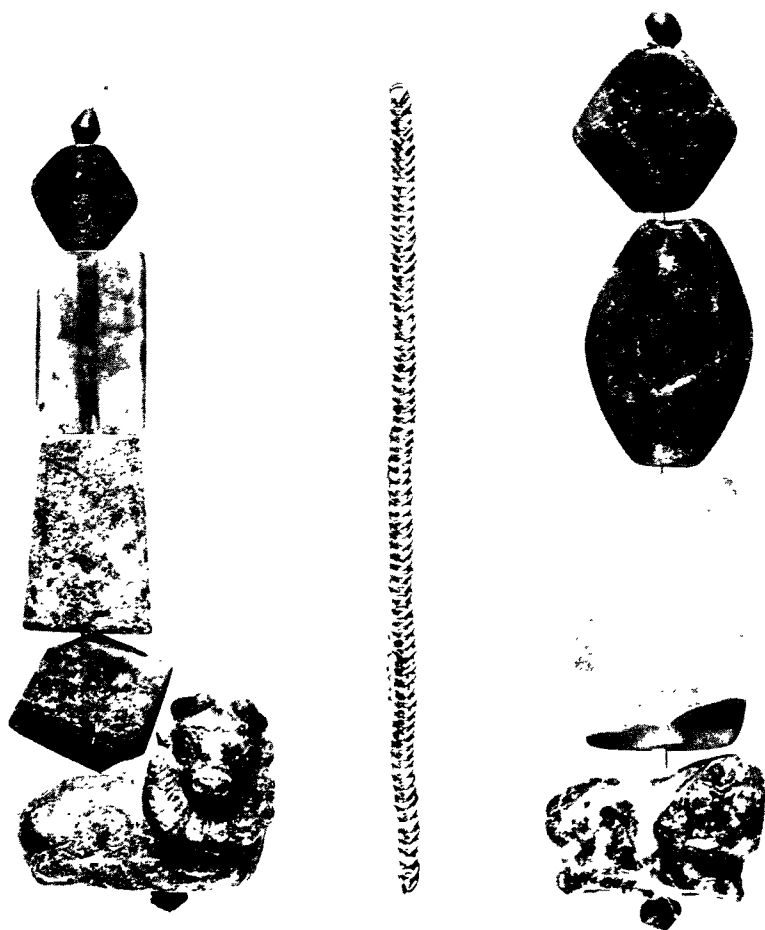


Queen Shyba's gold comb, earrings and crown.

the horned crown was introduced is still a very interesting problem. But it is clear at least that Queen Shubad took no delight in the mighty pair of horns which decorates the head of all the gods at the time of the first dynasty of Ur. The decorative motif of her comb, wreaths, and diadem is purely floral: beech leaves, willow leaves, pomegranate flowers, fruits in threes, buds and pods, palms, ears of corn, a comb spreading plumelike into digits tipped with seven lapis balls or seven golden flowers. The figures of animals in lapis, silver, and gold, which were used as decorative motifs, are pure animal forms. The ram, bull, deer, and antelope on the diadem, the fish and bull amulets, the monkey placed on the head of a pin, the donkey and the bull on rein-rings, the bulls and lions on the harps, thrones, and sledges are fine examples of realistic modelling. The characters of fable are still splendid animal figures. The imaginative mythology which gives them human attitudes is satisfied to give them also human hands only, or to hang a false beard from the nose of the bull. The man-headed bull and the scorpion-man point the way towards a new world of legendary creatures, half beasts, half men. But we are still far from the gods in human form, enthroned like kings and queens and worshipped in the style of a court. The high priest and the high priestess dressed in all their regalia and seated at their ritual banquet may have been prototypes of these.

Music and dancing also have a ritual aspect. The harp roaring like a bull and the clang of cymbals accompanied the chanting of prayers in the Sumerian temples. The small harp was sufficient for the private chapel of the queen. The magnificent harps of gold and silver discovered of late in the royal tombs must have been used in official ceremonies, real oriental pageants where the ladies of the court, the dancers, and singers would appear with their gorgeous headdresses of golden leaves, combs, and beads. The cymbals of Shubad's time were flat metal pieces straight or horn-shaped, which the dancers struck in cadence. They are seen in the hands of the kid dancing behind the scorpion-man: in the hands of a cymbal player on a gold cylinder seal of the high priestess buried in the domed vault discovered last winter: in the hands of a woman musician on the Kish inlaid plaques. Curiously enough the Museum has two such plates of copper brought from Fara thirty years ago, together with the well known bronze head of a goat with spiral horns. They are, most likely, Sumerian cymbals of Queen Shubad's

PLATE V

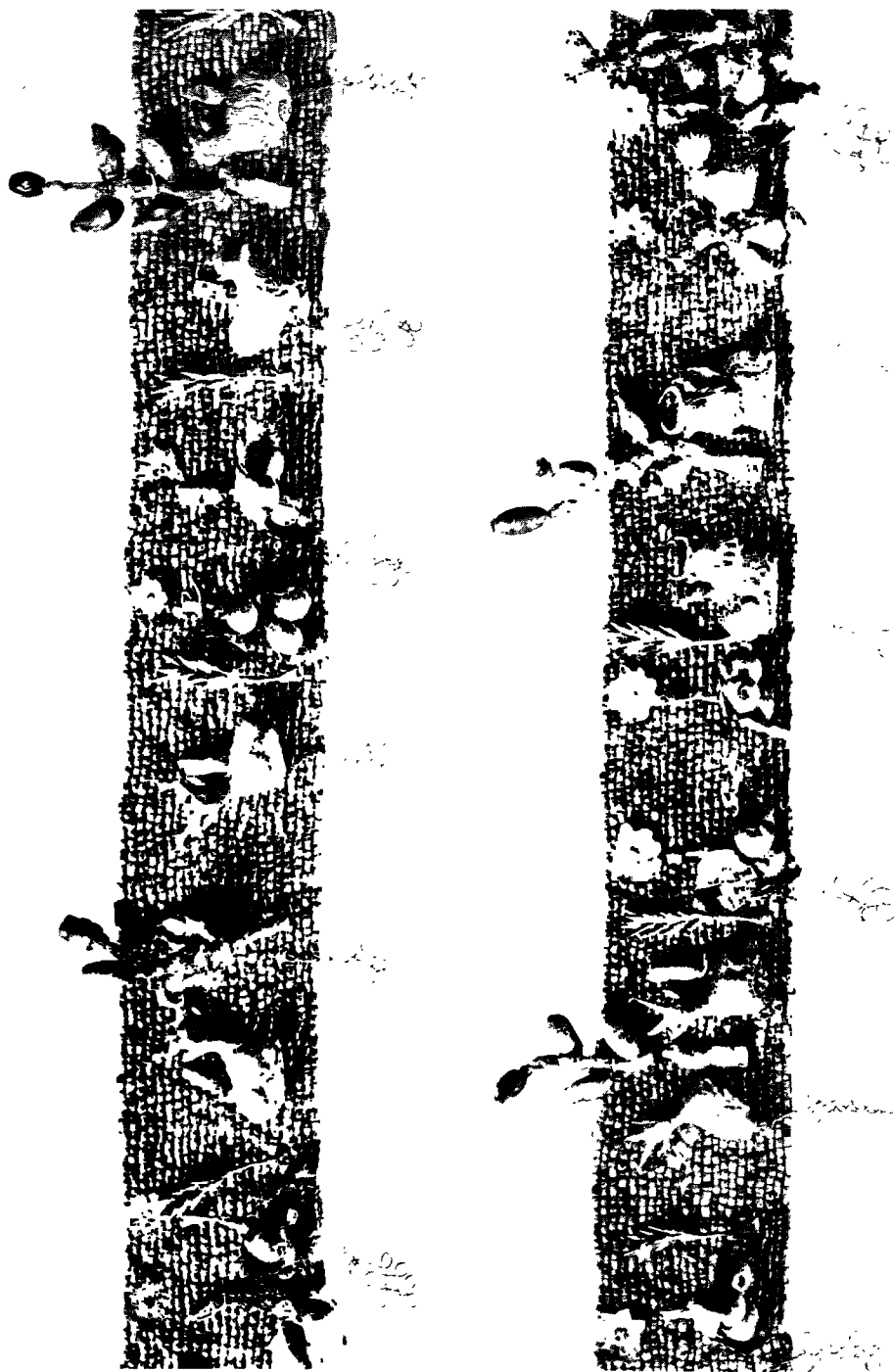


Queen Shubad's pendants of lapis, agate and carnelian on gold chain. The bearded bull belongs to the University Museum, U. 10985, CBS. 16726; the reclining calf to the British Museum. U. 10946, 10947.

age. They are curved, thirty-five centimeters long, and four in width at the larger end.

The ladies of Kish dressed their hair very much after the style of Queen Shubad on her seals. It is lifted from the shoulders, forming a heavy roll on the neck, is bound with a golden band passing over the forehead, and is twisted into a topknot on the crown. It is waved and curled over the eyebrows, and two small braids caressing the ears add an attractive charm. The large noses of the ladies, their prominent eyebrows, large almond eyes, and small, firm chins are decidedly oriental, but the rather heavy features are attenuated to more graceful type than that of the men. Their ears are not covered by any wig or "bob" after the fashion of Egypt. They wear one or two strings of beads round the neck. A shawl covers the left shoulder. One raises a fluted bowl, the other plays the cymbals or resonant plates (Plate X, A).

At Kish roughly modelled figures of women decorate the flat spouts of clay vessels buried with the dead in the oldest cemetery. These are probably ritual vessels, known as Kish "granny vessels." The figure has neither arms nor legs, but only a nose pinched up from the clay, two eyes and two breasts made of pellets of clay, and, in the more complete examples, a large triangular patch with incised markings for the pubes. Sometimes the figure is reduced to a couple of pellets and crossed incised lines. The spout is planted on the shoulder of the vase, and the bulbous part of the vessel may represent the rest of the feminine body. Such figures modelled and incised on a clay plaque are often called idols, though with no clear reason. Their association with the grave may give them a ritual meaning, common to funerals, the solemn passing of the dead into his house of eternity. The tombs were furnished according to the means and rank of the occupants. Royal persons took with them their guards, servants, singers, chambermaids, their chariots, harps, and gaming boards, their rich vessels and jewels, and a large provision of food and drink. The poor man had to be satisfied with less. The representation of the female body with direct and crude oriental realism, simply as a decoration of a jar of clear water, might, through its symbolism, satisfy his eternal thirst, better described in the style of the Arabian Nights. We need not see in these figures a mother goddess, an object of worship, but a practical means of satisfaction for the dead. Clay figurines, reliefs of the gods, or of the deceased worshipper before the shrine of his god, are found abundantly more



Queen Shubad's diadem of gold figures and ornaments on a background of lapis beads. Four pair of bulls, antelopes, rams and deer, amidst gold shrubs, flowers, ears of corn and fruits.

than one thousand years later in the graves of the third Ur dynasty. But only the "granny vases" in the early Kish cemetery suggest an analogy with the later practice. The rough clay figures modelled on the vases are purely natural and human like the scenes engraved on the seals of Queen Shubad. No symbolic meaning can be attached to them, any more than to the still earlier mud figurines of men, animals, sheep, goats, cattle, and dogs found in deeper levels. They are figures of a natural person or thing, a means of affecting the hidden spirit through its outside form.

The "granny vase" found at Ur in grave 778 (Plate IX), not far from the royal tombs, shows that the practice was not limited to Kish. Still more interesting is another clay figurine roughly modelled by hand and planted on the shoulder of a jar like a spout. It is no longer a flattened tube but a real handle decorated with the head, breasts, and arms of a woman. She has the unmistakable attitude of the oriental Ishtar exposing herself which has been translated by the Greeks into the pudical Aphrodite. The style shows progress, but the inspiration is the same as in the Kish series. The nose is pinched up with the fingers out of the mass of clay. Eyes and breasts are added pellets. The hair of the head and of the pubes, the mouth, fingers, and necklace are marked by incisions. The figure has no legs, but rests on the shoulder of a jar, a fragment of which is seen behind the figure, with decorative markings in front of it (Plate IX).

Her hair is tied after the fashion of the ladies of Kish, parted and waved, tied on the top of the crown and forming a roll on the neck. This is almost the style of Queen Shubad. The ears are visible; they are pierced to receive rings. She wears a dog-collar necklace. The ladies of the court at Ur preferred a tightly fitting necklace made of alternate triangles of gold and lapis with a wavy surface, and extraordinarily large gold earrings with crescent or lunate ends.

The fair ladies of Ur took pride in their hair. It might be worn simply floating on the shoulders, or hanging down the back, or parted and waved and bound with a crossband. They knew the allurements of locks and braids. Even when they tied it up in a roll they loved to let luxuriant curls play on the breast in front. Ishtar always had curls on her shoulders and curls lying on her breast. Little "Mother Goose" insisted on two curls but the rest of her hair is tied in a dignified roll on the neck. On many later terra-cottas

PLATE VII



Handle of mother-of-pearl with lion in relief.
U.10437.A. CBS.16765

the young mother goddess or votary has "bouclettes" on her shoulders, but the ears are never hidden. The Museum has two charming examples of the type, a clay head modelled in the round and a small gold statuette which forms the head of a gold pin (p. 242).

When the hair was too long to be completely confined, it was allowed to flow freely over the band which pressed the roll down on to the neck. This slender curling end, which is visible on many seals and reliefs, sometimes takes on the proportions of a queue, distinguishing the daughters from the sons on a fragment of a stone votive plaque from Ur. A beautiful diorite head, on which all the details of waved hair, roll on the neck, band, and unconfined hair are quite distinct, shows that Shubad's style survived for more than a thousand years. The head belongs to the British Museum and was found at Ur with the blue-eyed white marble head of the University Museum. A fragment of stone vase from Nippur shows a water nymph holding an overflowing ampulla. Her head, unfortunately broken, must have been turned sideways, and a heavy lock falls between the two breasts (C, Plate VIII).

But these heads and reliefs are comparatively late, dating from Gudea and the third dynasty of Ur. Monuments of the time of King Ur Nina of Lagash are more interesting because closer to the time of Shubad.

Besides their long hair, tresses, and chignons, the ladies, enthroned or walking, wear crowns adorned with horns, feathers, plumes, or animal figures in relief, which compare with the crowns, diadems, and combs of Shubad and of her maids of honour. The gods and goddesses, distinguished by the horned mitre, are not unlike the high priestess and her votaries in their best attire. Old and well known reliefs from Nippur, Lagash, and Ur show how much they have in common.

In Figure D, Plate VIII, a priestess of high rank introduces a votary, whom she leads by the hand. Both have the same long hair falling down the back, with a loose lock in front, both wear the same interesting crown, both have the same type of Sumerian beauty marked by large noses, arched eyebrows, almond eyes, small chin, and a naïve smile. Both are dressed in a plain shawl passing over the left shoulder and decorated with a simple fringe. But the priestess-leader has tied about her waist a long embroidered belt or bejewelled stola, passing in a spiral around her body and crossed in front. She carries a sceptre in her right hand. Beneath a mass of



A. Nippur, terra-cotta, CBS. 350
 B. Nippur, limestone relief.
 C. Nippur, stone vase with figure in relief, CBS. 9553.
 D. Ur, engraved shell plaque, U. 2826.

beads which were found covering the upper part of the body of Queen Shubad, and which were of course unstrung and much disordered, there was about the waist an embroidered belt, the design of which could be made out. It consists of ten rows of bugle beads of gold, lapis, and carnelian, which were originally stitched on to some material, probably leather, with a row of at least twenty-nine large gold beads below. The belt did not completely encircle the body, the span being completed by strings of small lapis beads. Sceptres decorated with mosaic work of blue and white stone above and gold bands in relief below, were found this winter in the great four-chamber tomb, which was probably that of another royal priestess. The votary has neither sceptre nor belt but raises her right hand in what is clearly a ritual gesture, with the thumb crossing the four fingers on the palm of the hand.

The band tied about the head of the priestess and of the votary, to keep their hair in order, becomes, through added ornaments, a fillet, a diadem, a crown, a mitre. Queen Shubad preferred a wide gold ribbon wound many times in a spiral about her luxuriant black hair. She used thirteen yards of the bright soft metal from two fifths to four fifths of an inch in width and weighing 1.04 lb. The end of the ribbon was bent over and soldered in a loop by which it was fastened with a pin to the mass of hair. A priestess and a votary, engraved on a small shell plaque from a deep level at Ur, both wear the horned mitre. Above the first band around the head and attached to it by two strands of ribbon a pair of bull's horns, probably imitated in metal and joined in the form of a crescent, forms henceforth the accepted emblem of the gods and of their households. Between the horns, objects resembling feathers or palm branches may be the upper branches of a golden comb planted in the roll of hair. Shubad's golden comb spreads into seven branches tipped with golden rosettes having centres of gold and lapis. These are linked together by a golden chain, and droop gracefully over the head. Her maids of honour wore silver combs having three points ending in flower-like rosettes inlaid with gold, shell, and red stone. Others preferred silver combs spreading into five or seven points ending in balls of gold or lapis. Shubad sometimes changed her flower comb for a large golden triangular pin. The top of the pin is rolled over to form a tube in which feathers could be fixed. The ladies of the court were satisfied with silver pins of the same form. The queen's gold pin lay beside her waist, together with another splendid diadem of gold and lapis.

PLATE IX



Clay pot with flat spout incised and decorated with pellets.
U1 predynastic cemetery. U. 10183, PG. 778. CBS. 17249

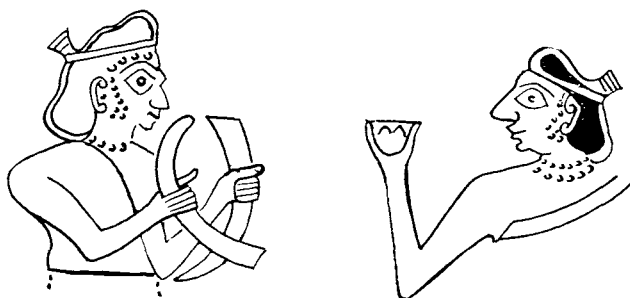


Terra-cotta figurine of a nude woman as
handle of a clay pot. U. 10747. In the
British Museum.

On the horned mitre in Figure A, Plate VIII, the central piece of the comb is decorated with a bull's head. The animal motif may be a symbol of the god of the silver crescent called the young bull of heaven, but it at once becomes the common property of all deities. The warrior goddess on a terra-cotta from Nippur holds up two lances with heads of an elegant leaf-shaped type, very much like the gold, silver, and copper spears of the royal tombs of Shubad's time. They were mounted in an octagonal wooden shaft by means of a square tang secured with bitumen. Gold and silver bands decorate the shaft of the royal spears. Some have plain butts; in other cases the butt is of gold or silver with a projecting copper fork to engage the throwing thong, when fighting at a distance. The smith has put his mark on many of them, a bull's leg, a jackal, or a bird. The soldiers of the guard had two spears apiece. Spears go in pairs. Our Sumerian Minerva holds two lances. She wears not a helmet but the horned mitre. The horns are attached not above but below the diadem, planted on each side of the head, probably meeting behind across the chignon. The comb has three feathers or palm-ettes on each side and a bull's head in relief in the centre. The heavy ornaments are planted in the roll or mass of hair tied on the neck. Large earrings project below the horns. Shubad's enormous golden earrings, eleven centimeters across and sixty ounces in weight, were attached under the gold ribbon in the hair. They have lunate ends, too large to be passed through the lobe of the ear. They were hung on the ear, not descending below the level of the jaw, framing the face like the large silver rings of modern Arab women. There were also earrings of gold, silver, or copper in the form of rings made of plain spiral coil, and pendants which were open rings with crescentic ends overlapping. Four spiral rings of gold of Queen Shubad were perhaps earrings. A dog-collar necklace made of gold and lapis triangles enclosed her neck. The warrior goddess wears a very closely fitting necklace. She has the Sumerian type of face with large nose, bushy, meeting eyebrows, almond eyes and small chin.

In Fig. B, Pl. X, the goddess of Lagash seated on an ancient Sumerian stool with rungs and drinking out of a fluted tumbler is a distant relative of Shubad and has inherited her beautiful cups. But she has adopted the horned mitre. Her hair falls loosely behind and in two tresses in front. It is waved and arranged in formal curls over the forehead. The points of the horns are much closer.

PLATE X



A. Kish ladies playing the cymbals and drinking from a cup.
Kish, Vol. I, Plates VI, XXXVIII.

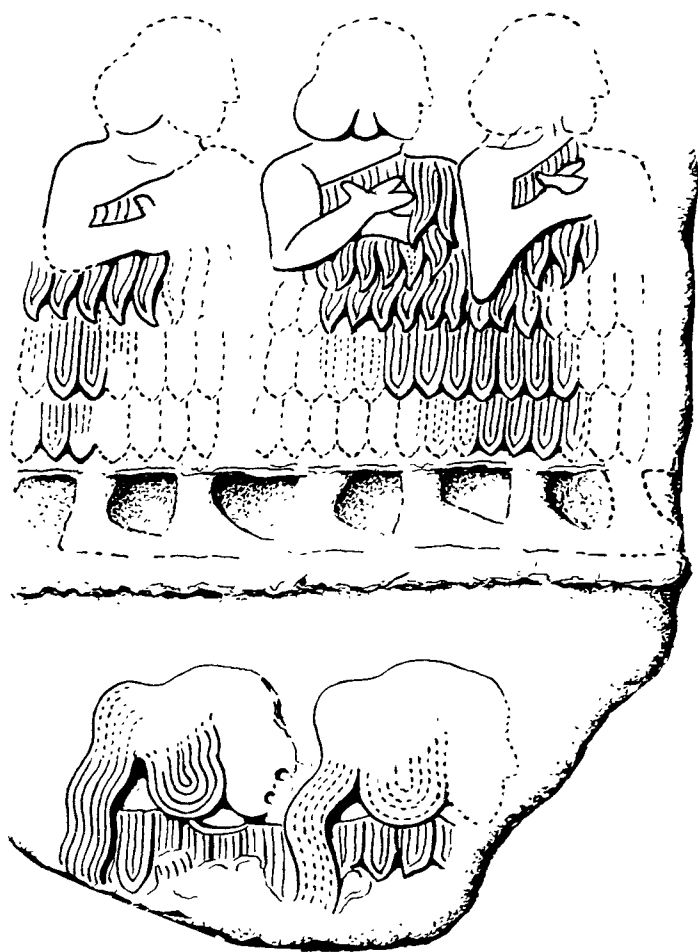


B. Goddess drinking out of a fluted tumbler. Bearded hero clubbing a prisoner. Limestone relief from *Tello Lagash*, *Déc.* Plate I, 1.

The feather and plume decoration of the comb are somewhat indistinct. A servant, perhaps a nude priest, with a libation vase stands before her. Her husband the king is dispatching a prisoner by knocking him on the head with his big club. It is a speaking picture, the emblem of a protector of the city. He wears a false beard attached below his chin and perhaps a gold wig like that of Mes-kalamdug, with imitation of hair confined by a band. The prisoner, kneeling and handcuffed, is closely shaven and has the wound mark of the vanquished enemies which is seen on the inlay stela. This fragment of a limestone plaque with figures in low relief is one of the oldest sculptures from Lagash, anterior to King Ur Nina and close to the time of Shubad.

In Fig. B, Pl. VIII, the "Mother Goose" from Nippur on another fragment of limestone relief belongs to the same family of monuments. It was published years ago, but the new discoveries throw light on some of its details. The goddess is lifting the same ritual cup. Her throne is the symbolic goose. She holds in her right hand what looks like ears of corn or bunches of dates, but this may be simply a fly-whisk, to judge from a comparison with the object in the hands of the old Sumerian king on the engraved shell plaques which decorate a harp discovered last winter (*Museum Journal*, March, 1929, p. 28). She wears a gold band about her head, a heavy roll on the neck, a long tress down her back and formal curls above the forehead. Her comb is curiously like antlers with three tines on each side and a similar one is seen on the head of her husband, who is introducing the worshipper. Her long fleecy shawl of kaunakes modestly covers her left shoulder. Branches planted in a vase shaped like a small offering table stand before her, while the curious object beyond has been explained by Hilprecht as a lighted candlestick and by H. Schafer as the representation of a nude woman seated with legs apart and arms erect, possibly in the pangs of childbirth. Most probably it is a candlestick or a ritual emblem, like that on the charming seal illustrated on Pl. XXXVI, 79, or on the engraved shell plaque published in the *Museum Journal*, June, 1927, p. 150. The nude libator holding a saucer and a jug with a spout stands in front of a high tripod, from which hangs the same curious band with two looped ends which decorates the Nippur candlestick. The same bull's legs of copper support the shaft in both cases. They are found again on the seal as the support of a flag, and below the sideboard of Queen Shubad. The same looped band is thrown

PLATE XI



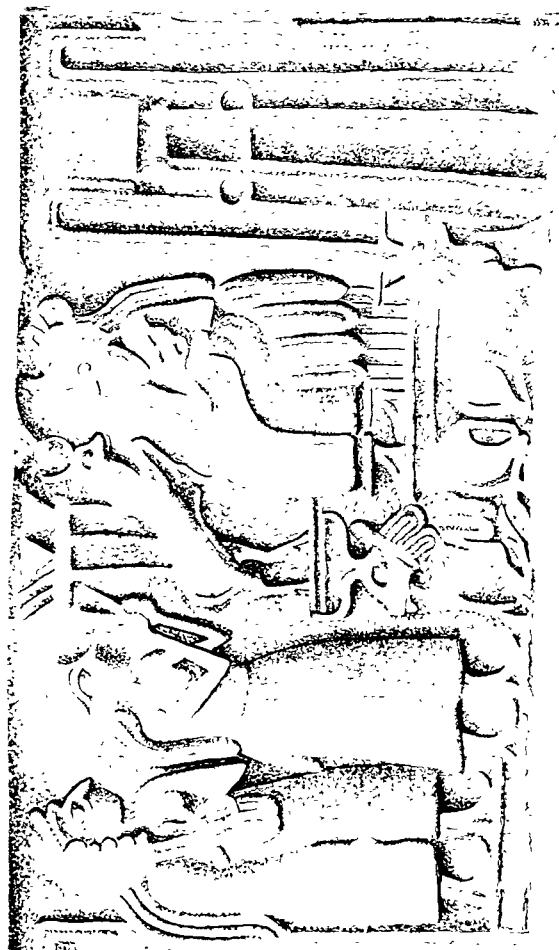
Headdress of men and women on a fragment of an inscribed limestone plaque. U. 6691 (*Ur Tertis*, No. 13). CBS. 16682.

across a vase on which the nude libator pours water before the shrine of the Moon God (*Museum Journal*, September, 1926, p. 258). The looped ends here take the place of bunches of dates which in libation scenes usually hang on each side of a vase holding palms. Perhaps an older form of ritual is represented on this last limestone relief. It is remarkable that the vase is placed in front of a pile of sticks—the wood of the holocaust?—here and on the stela of the vultures and on another seal, Pl. XXXVI, 80, found in an early grave. But in the last two examples palms and bunches of dates are unmistakable. The right meaning of the looped band is still dubious.

The crowned husband of the goose goddess acts as a verger, introducing the worshipper. The goddess turns her back on the scene, which lacks unity here and on the Lagash relief, forming a series of disconnected ritual actions. The king has long hair and a false beard after the old Sumerian fashion, from Kish to Nippur and Ur. He holds a sceptre, his staff of office. He and the shaven worshipper wear short fringed kilts. The offering is a kid or a young gazelle.

The ritual scene on a seal cylinder from Berlin (Bruno Meissner, *Bab. u. Assyriol.*, Bd. I), Plate XII is full of the same old Sumerian tradition. It is a complete picture of a libation before a shrine. The libator holding a vase with a spout before the enthroned god has long hair and a simple kilt closing in front. It is hard to decide whether we have a male or a female official of the temple, since entire nudity is no longer prescribed. The god and his worshipper both wear long hair falling down their backs. But the god has a false beard hung below his chin, while the smooth chin of the worshipper and the tresses falling on his shoulders are ambiguous. The long locks may be the formal headdress of a king or of a queen. Anyhow this important person stands one step higher than the libator. The object in his hands is not distinct, and leaves our curiosity unsatisfied. It may be a fluted bowl hanging from a rope handle, with a long spout, or perhaps a small hand harp.

The throne of the god, his headdress, furniture, and shrine are rich in details invaluable for a true reconstruction. A recessed gate leads to the throne room. Two posts bearing buckles decorate the outside. What is perhaps a curtain or a banderole hangs from the buckles. The tops of the posts end as the rounded heads of colossal clubs. Above the clubs a crescent-shaped panel between two projections of the towerlike gate forms a parapet breast high at the edge



Sumerian shrine, enthroned god, Hlatur and worshipper. Remarkable cane altar and figure of a bull rampant. Seal cylinder in the Berlin Museum. Cf. Bruno Meissner, *Bab. u. Assyriol.*, Band I, Abb. 163.

of the upper terrace. The throne inside is raised on a dais, with two crouching animals in front. These may be bulls or, more likely, goats, to judge from the tuft of beard, the hair on the neck, and the shape of the horns. The two prodromes of crouching rams cut in limestone, which were found four years ago inside the temple close to the Nebuchadnezzar gate, served the same purpose. The animals are represented in a familiar attitude with one fore leg raised, ready to rise from the ground. Back to back they form a well balanced group, in good Sumerian style.

The offering table, the old Sumerian cane altar decorated with the figure of a rampant bull in the round, is a most fascinating piece of furniture in the light of the latest discoveries. Pieces of bread—the shew-bread—and cups of wine, and the frame, if not the cross-pieces, of the cane altar are familiar. Metal figures, bulls' heads in gold and silver, bulls passant, and even stags rampant amidst bushes, are the magnificent ornaments of the royal harps. They were not known in connection with the cane altar. The figure on the seal may explain the two famous statuettes of goats rampant, found in January in a royal tomb, together with four harps, one wagon, and seventy-two bodies, among which thirty-four were those of court ladies with their headdresses of gold ribbons, wreaths, and silver combs, and their earrings and necklaces. The goats are twenty inches high, rearing up on their hind legs, with their fore legs caught in bushes, the stems, leaves, and flower rosettes of which are of gold. The fore legs are tied with silver bands. The heads and legs are of gold, the bellies of silver, the horns and shoulder hair of lapis, and the fleece of white shell, each tuft being cut separately. The same composition is found on many engraved plaques and strangely resembles the bull rampant on the Berlin seal. Bulls and goats stand on a small base, which in the Ur examples is a charming mosaic of checkerboard pattern. There are sockets above the figures of the goats, which proves that they formed part of a piece of furniture. The gold offering table in the very shrine of the god is preserved in the Hebrew tradition, and existed in the temple of Babylon in the days of Herodotus.

The enthroned god holds in his hands an indistinct object, cup, jar, or sceptre. Like the Moon God on the limestone relief (*Museum Journal*, September, 1926, p. 258), he has long hair and beard, long skirt, what is perhaps a shawl closing in front, and the primitive horned mitre, with one pair of horns and a plume. His throne with a

concave seat and a small back is of the same style as the cane altar. A rich cloth of kaunakes, or perhaps a real fleece, covers it.

On a seal from Ur, Pl. XXXVI, 80, discovered not far from the royal graves, two worshippers approach another Sumerian deity of the same primitive type. An interesting vase of offerings is the centre of the picture, between the god and his servants. It is the familiar clay or alabaster vase with palms, branches, and bunches of dates, placed in front of a pile of sticks. The god holds a small bowl. The worshippers bring offerings. All wear the thick fleecy skirt. The throne is still of the old Sumerian cane type. The crescent of the new moon adds to the scene a ritual meaning.

The seal has two registers of figures, like many archaic seals. The lower scene, which represents the gathering of dates from the palm tree by two apparently nude figures, was long ago mistaken for a scene of paradise. Many religious feasts preserve the tradition of the offering of the first-fruits. The month of the date harvest was a great occasion in Southern Babylonian life. The fecundation of the palm tree had a ritual importance, and so had the cutting of the first clusters of ripe fruits. The gold saw was probably used for the purpose by Queen Shubad, when the silver crescent first appeared at the beginning of the season. A saw of the same form is still used by the natives, and was placed thousands of years ago in the hands of the Sun God, the great judge, the divider between light and darkness.

Also from the Ur cemetery, but of later date —the time of Gudea—comes a very interesting seal, Pl. XXXVI, 79, representing the offering of the first ears of corn to a god of vegetation. The seal is the property of Ursi, a servant of Enmenanna, probably a high priest of Ur, whose name was found engraved on a door socket in the shrine of the Moon Goddess (*Ur Texts*, No. 64). Ursi himself carries the traditional plough of Babylonia, which evidently existed long before Cassite times. It has two handles on either side of the ploughshare, to which is attached the curved pole with tackle for two yokes over two pairs of oxen. The title of Ursi is *nigab*, which means the opener, the ritual cutter of the first furrows. The high priest Enmenanna leads the procession, his staff of honour in his hands. He is followed by the high priestess carrying the ripe ears. A flag on a tripod resting on bull's legs, flies the colours of the god, and marks the approach to the shrine. The god is distinguished by his sacred animal, a charming gazelle which has stopped behind the

throne, and by his star on high. He may be *Lugal-edin-na*, the god of Eden, the fertile plain. He is dressed in the official style of his time. A shawl of kaunakes covers one of his shoulders. The three dignitaries have the long pleated linen garment which men wore fastened about the waist. It covers modestly one shoulder of the high priestess. The style of mitres and headdressēs is remarkable. Four pairs of horns for the men and only one pair for the high priestess. The horned crown of the gods is probably borrowed from their human representatives. The hair of the enthroned god is tied in a heavy round mass with a projecting topknot after the style of the ladies of Kish. The same is true of the Moon God on the stela of Ur-Nammu. The male officials have a flat figure-eight roll of hair confined by a tight band. Graceful tresses fall down the back of the high priestess.

The many contemporary or slightly later evidences of Sumerian fashion in the time of Queen Shubad make possible the reconstruction of her headdress with fair certainty of truth. Hair and skull have disappeared, but the gold ribbons retained their position in the earth, and by lifting them without disturbing the strands outline and measurements were obtained. Mr. Woolley was led to assume "that the queen had a coiffure dressed over pads, the width across being no less than 0.38 m."

"Bobbed" hair covering both ears was a charming Egyptian fashion, but one seldom seen in the Sumerian land, where custom left the ears more or less visible. The golden ribbons may have spread when the hair and skull collapsed. It is more likely that the heavy mass of hair was held against the back of the neck in a figure-eight by the golden ribbon which passed across the forehead, so that the larger diameter was originally from the front to the back of the head. We should expect a mass of hair fastened at the neck, since this would seem necessary to support a golden comb over one pound in weight. Thirteen yards of gold ribbon are not too much to secure the adjustment. One end—if not both—of the gold ribbon was rolled over and soldered into a loop to attach it firmly to the hair with a pin driven through. Two strands of the ribbon passing from the nape of the neck to the crown reinforced the edifice on very pure Greek lines. The small curls before the ears are like those of the ladies of Kish and the locks on the shoulders like those of many Ishtars, love goddesses and goose goddesses. The heavy gold earrings hang below the gold band, over the ear, and do not descend below the jaw.

On many terra-cottas of later times they give a false appearance of "bobbed" hair. Probably a dog-collar of alternate triangles of gold and lapis was tightly fastened round the neck of the queen, like that worn by all the court ladies. The elements of it are found at the upper edge of the so-called cloak of beads. Other necklaces doubtless hung below in tiers.

To mount the headdress and provide a realistic setting for the ornaments, the University Museum has had a head made on lines differing somewhat from the one so charmingly modelled by Mrs. Woolley. Even if we had the skull of Cleopatra, we should have little suspicion of her beauty and of the curve of the nose which turned the destinies of the Roman Empire. The work of the Greek artists and the reliefs of the queen on her coins are of great assistance, even if the result is beneath our expectation. The opinion of Sumerian sculptors working on living models among contemporaries merits consideration. Even if they had not the Greek ideal of a portrait and the subtle Greek power of expression, they were masters of their craft and could carve a statue in hard diorite. They could give it a likeness true to the general type if not to the peculiar characteristics of an individual. Their masculine type is attenuated into one of feminine beauty, which always has heavy eyebrows meeting over the nose and giving to the face strength and character. The nose is strong, nearly straight, and somewhat rounded at the tip. The eyes are large, almond shaped, slightly drawn up at the outer corners. The lips are well formed, not of the objectionable fleshy type. The chin is small, firm, and, in the model selected, protruding and marked by a dimple. This model is a little diorite statue of the Gudea time from Lagash now in the Louvre and called, from her headdress "*la femme à l'écharpe*." She has the high cheek bones, large nose, and large eyes under powerful eyebrows of a true oriental beauty, and in spite of the sculptural effect of her staring eyes she possesses a charming queenly dignity.

Her eyes are shown as blue, for the reason that in many statues they are made of lapis lazuli inlaid in shell. We may enjoy the lapis blue, as the Sumerian artists did. It gives depth to her beauty. The mighty arc of her eyebrows was defined with black paint made of khol or stibium. Pots of this pigment have been found in many ladies' graves. Calcite vases half empty show on the surface of the black cosmetic the prints of dainty fingers dipped in it centuries ago. The queen kept her kohl in a pair of silver cockleshells and in

a charming semicircular toilet box of silver. The lid of the box is made of a piece of shell with animals in relief against a background of lapis lazuli. A powerful lion has thrown a ram down on its back and is biting its neck. The scene shows a keen observation of animal life and action and forms a well balanced group. The curve of the lion's uplifted tail fills, by a happy inspiration, the semicircle of the lid. Blue lapis dots in a chain of engraved diamond pattern decorate the edge of the lid.

The gold chalice of the queen, modelled on very classical lines, is filled with a new cosmetic of turquoise blue colour. Perhaps the blue is not the original colour, which may have faded with age.



Lid of Queen Shubad's kohl box.
Relief cut in shell with lapis background.

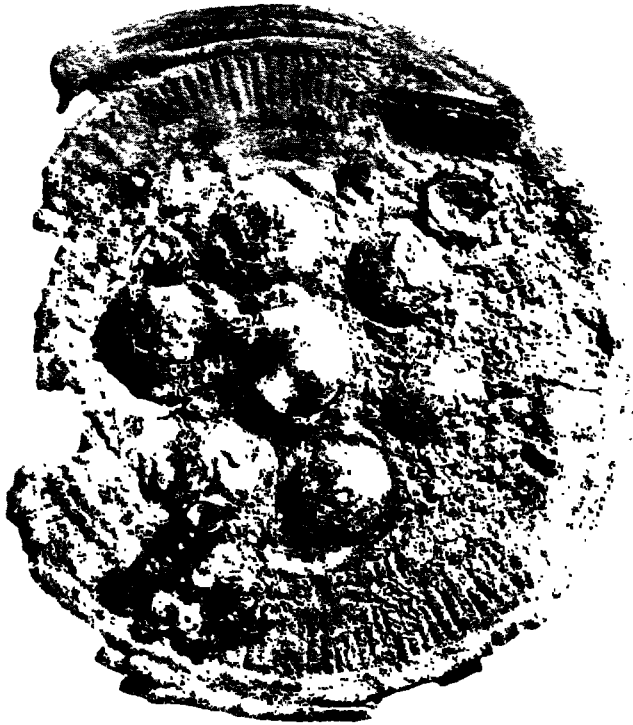
But the analysis made by the chemical department proves that the queen's cosmetic was really powdered turquoise mixed with traces of lead. Lead oxides vary from red to brown and yellow. Alloyed with the turquoise blue, they produce dark brown and purple shades of wonderful effect when applied to the eyelids. Very modern dolls must have heard of Queen Shubad's cosmetic. Every court lady had some of the blue paint, a small mass between the two valves of a cockleshell. A pair of cockleshells may have the two cosmetics in one mass, half blue, half black.

The blue cosmetic of the queen filled not only her gold chalice but also a pair of cockleshells of gold and a pair of very large real cockleshells. It was tempting to use the royal blue in a reconstruction of her head. A streak of blue defining the eyelids is just as wonderful as the green malachite about the eyes of Egyptian beauties.

We may fancy the colour of the skin of the brunette queen to have been anything from dead white to golden brown. Her lips

were the only red spot. If she used rouge it was made of hæmatite powder with traces of magnesite and phosphates from the clay with which it was mixed, as consistently found in examples from Ur and Nippur.

Golden wreaths added to the splendour of the queen's headdress. The gold ribbon bound to the neck the heavy roll of hair and secured



Silver filigree buckle with embossed and gilt centre. Found in the early cemetery. U. 8009. CBS. 16770.

the edifice. Above this the golden comb spread its seven golden rosettes linked by a gold wire, their gold and lapis hearts nodding aloft. The golden earrings framed the face in their heavy double crescents. On the rigid lines of the ribbon the wreaths embroidered the delicate pattern of their ornaments. Four wreaths were placed upon the head of the queen. One is a mass of rings and beads. Twenty gold rings are mounted on three strings of lapis and carnelian by narrow strips of gold. The second has twenty birch leaves of gold attached to two strings of lapis and carnelian. The third is built on the same pattern, but the eighteen golden leaves are larger and are tipped with beads of carnelian. The weight of gold of the three

wreaths is, respectively about 0.53, 0.44 and 0.375 lb. The fourth and most exquisite wreath is made of fourteen golden flowers with inlaid petals alternately of blue lapis and white paste, mounted on three strings of gold and lapis beads, with gold and lapis drops. Between the flowers are groups of three willow leaves of gold with carnelian tips. This wreath has been placed on her reconstructed head. It is hard to believe that she wore, when alive, the four at the same time. A queen has always more than one wreath, more



Sumerian Lady of Ur. About 2400 B. C.
Black diorite head in the British Museum. U. 6444.

than one necklace, more than one finger ring, more than one golden cup in reserve. A hairpin of triangular shape was found near her body and three golden pins on her shoulder. Another diadem of lapis beads and gold ornaments was folded by her side. Wreaths of golden leaves and wreaths of gold rings are found in many ladies' graves and may have been worn in pairs or single above the golden ribbons. One wreath in a child's grave was made of three strings of gold, lapis and carnelian beads, two gold roundels of wire filigree, and one large gold roundel of cloisonné.

Instead of a wreath, gold and silver plates and bands were sometimes worn on the forehead, attached with gold wire. They

were of plain metal, or decorated with engraved or repoussé work, with a star rosette in relief, or with rows of human and animal figures in intaglio. The thin elliptical gold plates were not used as they were in Egypt to seal the lips of the dead. Six golden frontlets were found round one head, and a golden band was still adhering to a broken skull.



Sumerian votary. Head of a gold pin found in the treasure house of the Temple of Ur. CBS. 15241.

The diadem of Queen Shubad is a marvel of delicate work. It consists of a thousand minute lapis beads, which were probably mounted on white leather, and of a profusion of gold ornaments attached by silver wires to the blue background. Among them are four pairs of animals couchant: two rams, two antlered stags, two gazelles, two bearded bulls, disposed amidst ears of corn in gold; bunches of pomegranates with three fruits tipped with carnelian and three golden leaves; shrubs made of gnarled stems of gold plated with silver and having fruits of gold, lapis, and carnelian; finally, palmettes of gold wire. Two other diadems made of golden figures over a bitumen core, pomegranates and animals, gold rosettes and leaves, and palmettes of silver wires, belonged to ladies of quality, perhaps to high priestesses.

Below her dog-collar of gold and lapis triangles, Queen Shubad wore another collar of small gold and lapis beads with a pendant, and a rosette of gold in the form of a wheel in which the open work is filled with lapis—not with carnelian. Strings of beads of gold, silver, lapis, carnelian, agate, later of jasper, chalcedony, sard, of copper gilt, beads large and very small, solid, or hollow and filled with bitumen, round, long, lentoid and conoid beads of every shape, form, and colour, have been found in every grave, and were apparently worn by both sexes. But where high officials were satisfied with three large lentoid beads of gold and lapis hung about the neck

on gold chains, or worn as bracelets, sometimes with carnelian spacers between the stones, the queen and the ladies of the court were never tired of new styles, new colours, and new forms, and carried their treasury of beads with them into the grave. Beads furnish rich and attractive matter for a more complete survey of ladies' adornment in the past. The upper part of the queen's body was found covered with a mass of beads, of course all loose and much disordered; but in spite of the breaking of the copper wires they lay in tolerably good order, and the arrangement was noted for restoration. They were mostly beads of gold—some adorned with applied filigree—but also of beautiful choice carnelian and banded agate, of lapis, and of silver.

It was at first thought that this mass of material should be constructed as a beaded cloak composed of vertical strings of mixed beads arbitrarily arranged between a fringe at the bottom and an open-work collar above. The cloak was thought to open on the right, and the solid edge to be embroidered with small carnelian beads. Three gold pins and three cylinder seals fastened the heavy mass on the right shoulder, besides a number of amulets and pendants.

If, however, instead of a cloak, the body of the queen was covered with a mass of disrupted necklaces, it is easier to understand the reason for the use of selected and graded beads of one type of banded agate, of others of a specially beautiful red carnelian, and of four strings of long gold filigree beads, which clash when lined up, with heavy gold or lapis conoids. Also the good taste of other jewels, rings, wreaths and combs, seems to protest against the disposition of mixed beads arbitrarily arranged in vertical strings. Necklaces hang in natural curves round the neck. Like the gold ribbons, they would have been deformed by the collapsing of the body in the grave.

It now seems wise to believe that the fringe referred to above was in fact a belt: ten rows of bugle beads of gold, lapis, and carnelian, and a row of twenty-nine gold rings below, sewn on some material which has disintegrated, and continued round the body by strings of small lapis beads; and that the collar was a separate unit made of lapis and gold triangles—the usual elements of the tightly fitting dog-collar, but here separated by gold beads, with small bugles sewn on horizontally below.

Precious amulets have been found in other graves, a gold bull with a false beard, a bird of gold with a lapis tail, a golden bird on a fruit. In the tomb of King Meskalamdug a lapis frog and a lapis ram; in a Sargonid grave, a goat rampant of gold hanging on a string of beads. Queen Shubad had the largest collection of all: two fishes of gold and one of lapis, a group of gazelles, seated back to back, found by her elbow, and by her shoulders a reclining calf and a bearded bull of lapis with a false beard attached by a string over the nose. Each of these last figures is hung on a short string of large agate, lapis, and carnelian beads.

Pendants were made of cloisonné work of gold, inlaid with stones and with filigree of gold in the form of large roundels. Big round buckles of silver filigree were used to secure a cloak. The finger rings of gold, silver or copper were generally a spiral coil of fairly thick wire. Out of ten gold rings of Queen Shubad seven are made of a square wire twisted and coiled in spiral with cable effect between two ends of plain wire; one has a border inlaid with lapis; and two are of cloisonné work inlaid with lapis. Larger coil rings of silver and gold are probably toe rings. Metal bracelets are plain bangles of gold, silver, and copper. The queen may have toyed with the sceptre beautifully decorated with gold bands in relief and inlaid mosaic, and with the fly-whisk handle checkered in black stone and white shell. We like to imagine her twisting in her fingers the silver spindle with the slightly convex lapis head—the silver shaft is still 16 cm. long—or the mother-of-pearl handle, decorated with a little lion in the round, which was probably fixed by three rivets to a palm leaf fan. She may have used the gold chisels, like the gold saw, for some ritual action, breaking a seal or tracing the first lines of a relief or of an inscription. She probably trimmed the large silver lamps which continued to light her grave as they had lighted her nights. Her little silver lamp, copied on a cockleshell cut in half, was close to her hand. The king had his gold lamp with his name engraved on it. Fair ladies preferred a lamp of translucent alabaster with a beautiful relief: a man-headed bearded bull, couchant. Many a time the queen moved the pieces on the magnificent gaming boards of silver, lapis, and shell, admiring the animal figures so cleverly designed by the court engraver, while her servants played on the harp and recited the heroic deeds of Gilgamesh, or the love affairs of the Queen of Heaven. Out of her wardrobe, the keeper of the wardrobe would bring pure pleated linen

tunics, white or purple shawls with fringes or embroideries, or the supple and warm kaunakes with its fleecy face. But the fine garments have long perished. Even the wooden chest in which they were preserved, probably of cedar wood, has turned to dust, leaving in the ground its mosaic border and its decoration of shell figures on a mosaic background.

But out of the dust archæology has brought forth a treasury of knowledge, beauty, and human interest, of which the Director of the Expedition, Mr. Woolley, and the two Museums supporting it feel very proud. Henceforth we shall have a new by-word of ancient history: In the days of Queen Shubad.

SCIENTIFIC NOTES ON THE FINDS FROM UR

I. RESTORATION OF THE SILVER

BY A. KENNETH GRAHAM

THE metallurgists of early times, as is well known, were able to produce bronzes of a composition and quality that have never been surpassed. In fact, their alloy containing approximately 90 per cent copper and 10 per cent tin is regarded as the best bronze composition for many purposes today. Their gold and silver, on the other hand, are not of the degree of purity that modern methods of refining permit, yet their artistic value does not suffer because of this. The delicate design of many gold and silver objects and the apparent skill of the workman are frequently such as to command one's admiration. This is particularly true of the silver objects from Ur, but one cannot fully appreciate these gems without first revealing the details by appropriate means of restoration.

The silver from Ur was encrusted with a thick layer of silver chloride, some so-called secondary silver from which the copper had been leached out, and in some cases of copper, so that it was not only difficult to appreciate their value but often quite impossible to distinguish their shape or details. In attempting to restore them, the very excellent methods of Dr. Alexander Scott, F.R.S., of the British Museum, who employed formic acid with marked success, and of Dr. Colin G. Fink of the Metropolitan Museum, who developed the electrolytic caustic soda treatment, were used whenever possible. However, no general method of treatment will apply in all cases and a number of modifications were necessary. This can best be illustrated by a brief description of the treatment given a few of the objects.

SILVER LIBATION EWER

This silver ewer (Plates XIII and XIV), which stands eight to ten inches high, had been filled with plaster to prevent it from being further crushed. The spout had been broken. The entire object was covered with a hard brown crust, essentially of silver chloride. After giving the electrolytic and then the formic acid treatment, most of the crust could be removed mechanically. Badly stained

areas were rubbed with a paste of zinc dust and weak sulphuric acid. The object was then gently brushed, washed, dried and lacquered. The metal was too thin and brittle to permit annealing and reforming.

SILVER BOWL

The silver bowl (Plate XV) had been nested in another bowl, so that a portion of the outside was almost perfectly preserved while the rest of the surface, both inside and outside, was severely corroded. The uncorroded area was smooth and showed no hammer marks, so that the article had no doubt been burnished after hammering into shape, as determined by evidence presented at the end of this paper.

The restoration treatment in this case was essentially the same as that given the previous object. It is interesting to note the distinctive mark on the outside of the bowl, which was not visible until the corrosion products had been removed. This stamp appears on many of the gold and silver objects and may have been used to identify the work of a particular silversmith in a similar manner to the "Hall Marks" which are such an interesting feature of the silver of a few hundred years ago.

SILVER ANTELOPE'S HEAD AND BRACELET

This interesting conglomerate (Plate XVI) was studied for some time before it was realized that the object holding the cockleshell might be a head of some horned animal. It was attached very securely to what was believed to be a solid silver ring. The object was given a long electrolytic treatment, followed by repeated boiling in formic acid, and brushing. A sharp pick was used to remove the loosened crust from the fine lines of the head. After gentle brushing it was washed, dried and lacquered.

The ring, after it had been separated from the head, while boiling in formic acid, was treated in a similar manner to the head and proved to be a bracelet of several turns of silver.

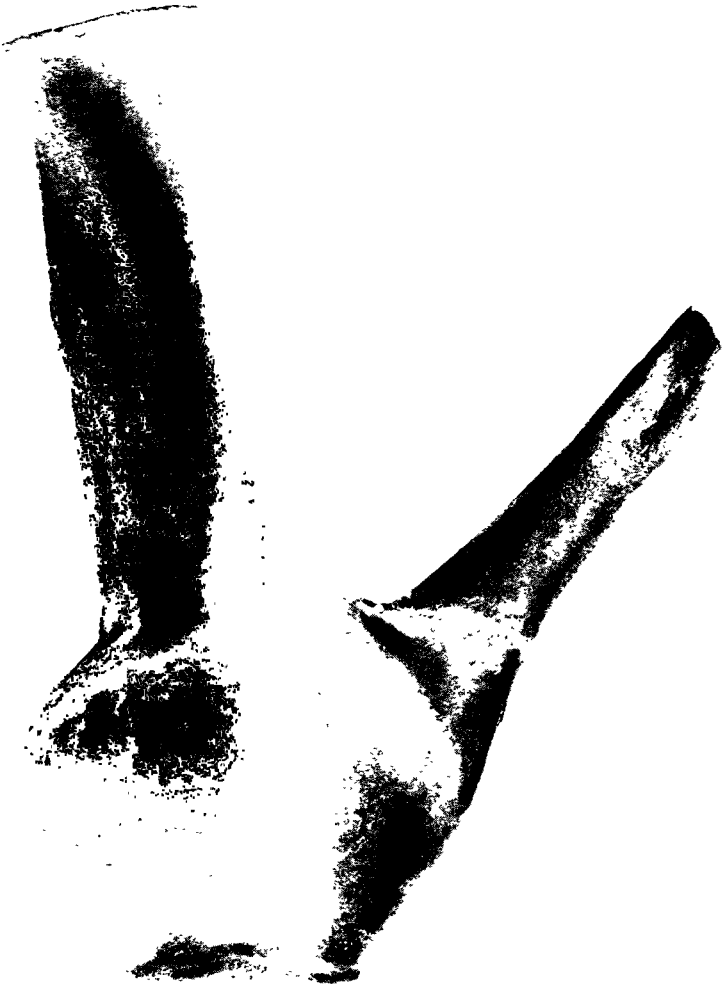
Several shells, gold and silver beads, and a lapis eye were also obtained. The large white cockleshell contained blue cosmetic similar to that reported upon elsewhere in this volume.

GOLD INLAID SILVER BOWL

This bowl (Pl. XVII) had evidently been given some treatment prior to the time that it was received. The silver was very rough



Silver libation ewer before cleaning.



Silver libation ewer after cleaning.

as the result of corrosion and the gold or "speculum" inlay was slightly tarnished and loosely adherent in places. The usual chemical procedure could not be followed for fear of losing the inlay. A mild treatment with formic acid and gentle brushing improved its appearance quite noticeably, after which it was washed, dried and lacquered. The twisted silver handle was too corroded to permit restoration.

SILVER RINGS

A number of silver rings were treated (page 255). In some cases there was a very hard crust of secondary silver surrounding a weak porous core of metal. The crust could not be removed by mechanical means without danger of breaking the object and was quite resistant to any of the reagents used to remove the outer layer of chloride.

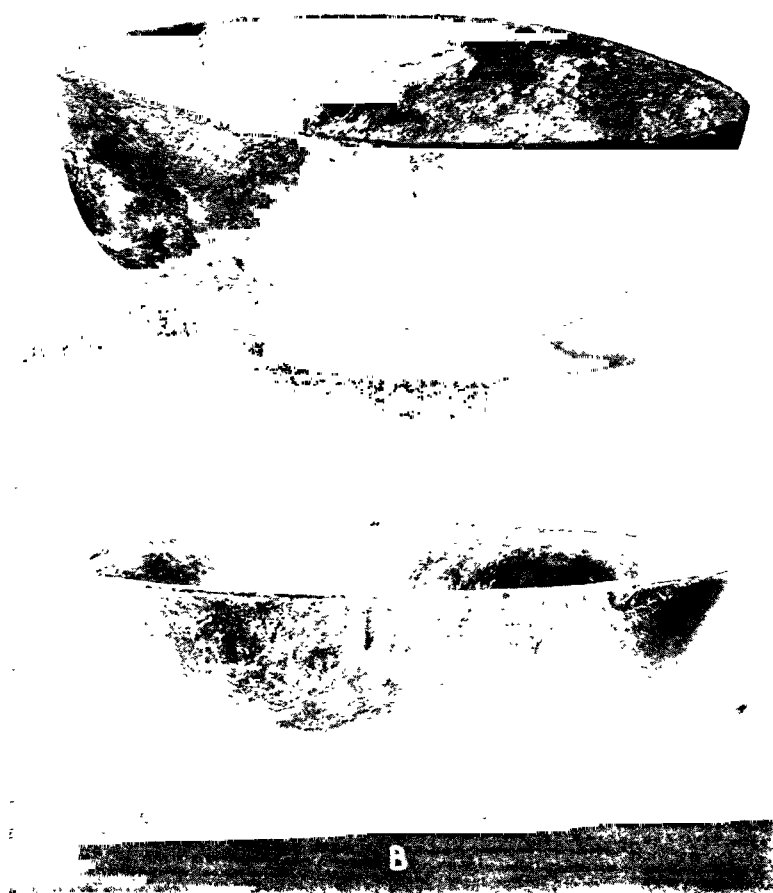
In other cases the crust was almost entirely silver chloride and after the usual electrolytic and formic acid treatment, boiling in ammoniacal sulphite solution containing small quantities of copper assisted in removing the crust. In severe cases soaking in sodium thiosulphate solution worked well, but the metal was apparently weakened if allowed to remain in the solution too long.

SILVER BEADS

A large quantity of silver beads were badly corroded and sometimes firmly stuck together (Pl. XVIII). These could not be wired for the electrolytic treatment. They were usually given a soaking in ammonium hydroxide (30% by volume), boiled in formic acid and then given one or both of the other treatments, namely, boiling in sulphite solution or soaking in thiosulphate. When the beads were separated and most of the corrosion product was removed, they were redrilled, strung on wires and brushed. Those that required no further treatment were washed, dried and lacquered.

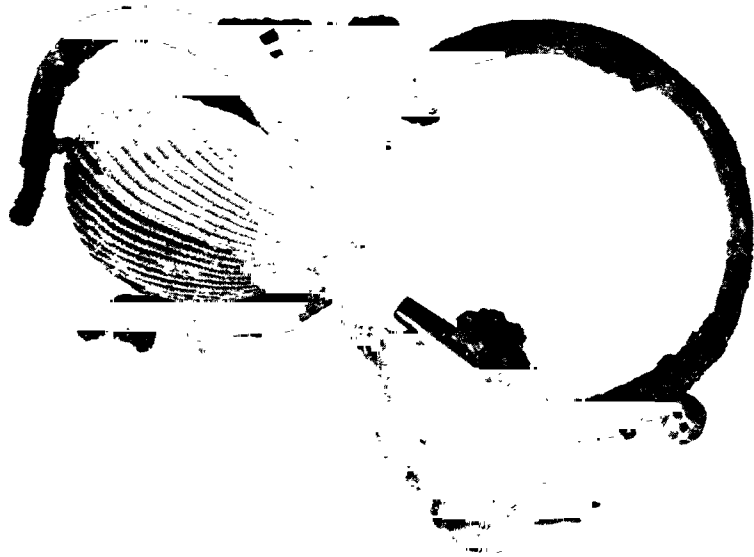
II. METALLURGICAL NOTES

Not much is known about the methods of working metals in these early times, but to reproduce the silver bowl shown in Plate XV would require no ordinary amount of skill even with modern methods. The silver alloy would first have to be prepared and cast into convenient form. It would then be alternately heated in a furnace (annealed) and rolled until a flat sheet of the desired thickness is obtained. The silversmith would carefully study the shape of the

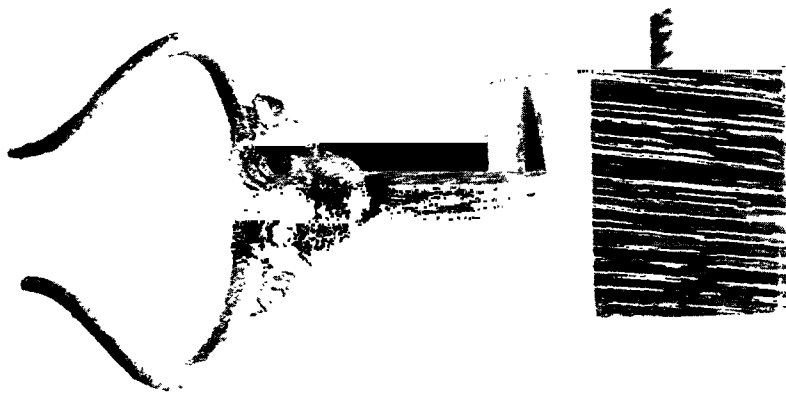


The silver bowl.

The upper bowl shows crust of corrosion products.
In the cleaned bowl note the speculum lug to which the handle was
attached and the bull's leg engraved on the side.



The mass from which came the antelope's head, a bracelet, shells and gold and silver beads.



The antelope's head which held the cockleshell.

object to be produced and then proceed to cut a pattern out of the flat sheet metal. He would then prepare forms upon which the metal would be hammered to the finished shape. In accomplishing this, at least three to five annealing operations would be required, depending on the skill of the workman, in order to keep the metal soft enough to work into shape.

If the silver articles from Ur were produced in a similar manner, the metal would exhibit a structure similar to a modern silver article. Examination under the microscope has shown this to be the case (page 257). The structure is that of annealed metal with numerous cases of twinning indicating previous working. One may conclude, therefore, that the silver alloy was first cast and then alternately annealed and hammered until the desired object was obtained, as twinning can occur only when metal is annealed after being worked.

Silversmiths of today are regarded as the highest type of skilled labour and there is a dearth of them, both on this continent and abroad. To produce a libation urn as illustrated in Plate XIV would be a worthy accomplishment even with modern methods, which is tribute enough to the workman who made it.

III. THE COSMETICS OF QUEEN SHUBAD

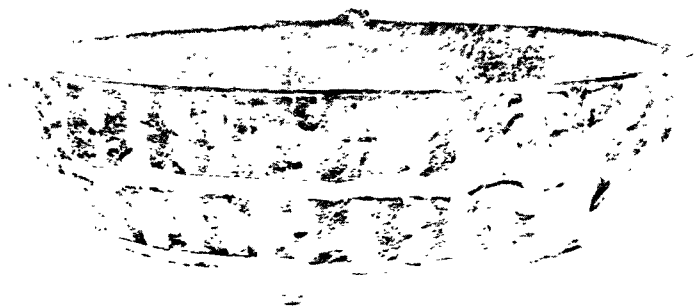
Those guardians of the public welfare whose duty it is to see that the requirements of the food and drug laws are upheld would have had front page publicity in the time of Queen Shubad because her lip and eyebrow paint contained large quantities of lead, a trace of which is dangerously poisonous. This rather startling discovery was made while analyzing two samples of cosmetics taken from the tomb at Ur. The other results of these analyses are also of sufficient scientific interest to be given in detail.

One sample of what appeared to be a light blue clay was found to contain large quantities of aluminum phosphate, copper, lead and carbonate, with traces of iron, calcium and silica. One would conclude that this was powdered turquoise, a naturally occurring mineral consisting of hydrated aluminum phosphate with the usual copper impurity in sufficient quantity to colour it blue.

A second sample of black powder similar to antimony or "kohl" was found upon analysis to contain a large amount of manganese and lead, with small quantities of copper, aluminum, phosphate, car-



A



B

The gold inlaid silver bowl—before and after cleaning.

bonate, silica and iron. The last six substances were evidently present as turquoise, as described above. The black colour could only be attributed to the manganese, the black oxide of which is a naturally occurring mineral, pyrolusite.

The presence of lead and carbonate in both samples is quite unexpected, as they are not associated with either turquoise or pyrolusite in nature and must have been added purposely. The oxides of lead are coloured and when mixed with the above minerals in powdered form give attractive shades of brown, red and purple. Women of today prefer red for the lips and black for the eyebrows and, while it is known that black, blue and red colors were similarly used in those

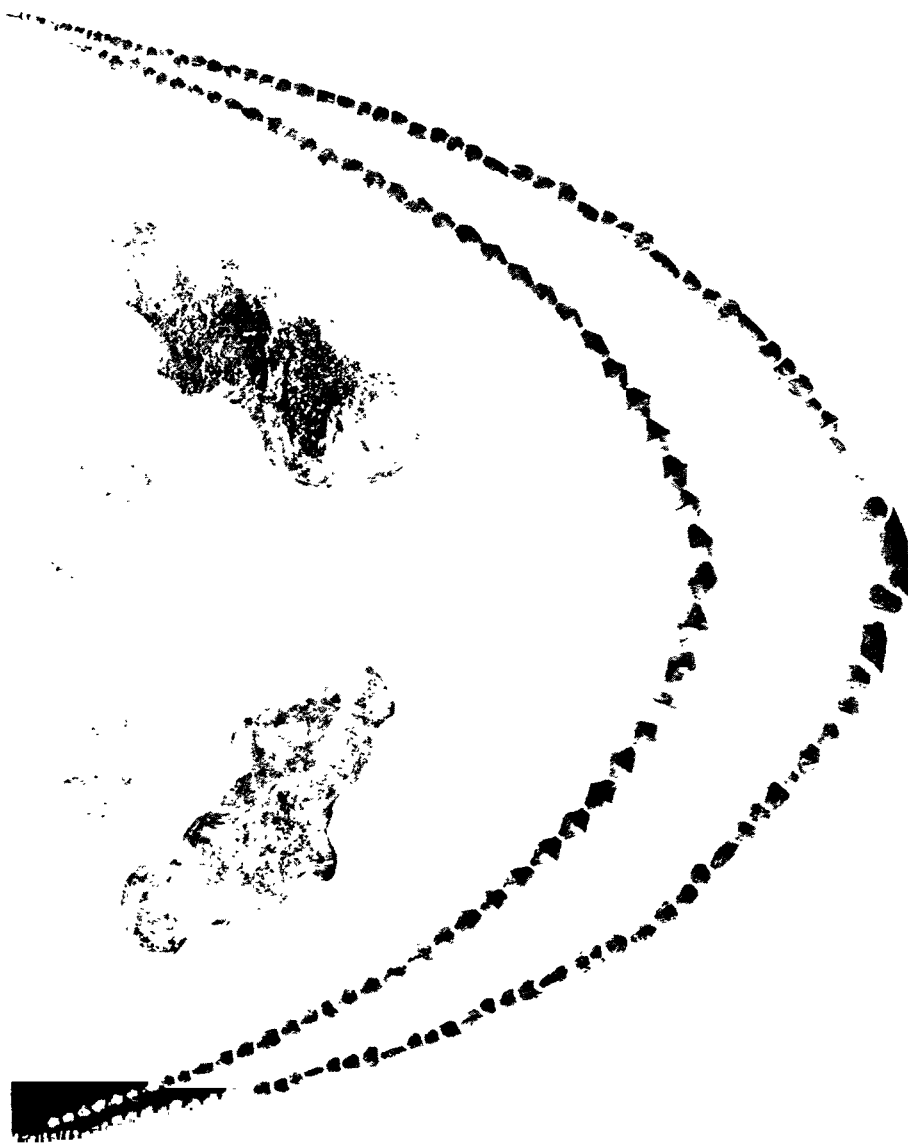


A silver ring before and after cleaning.

early times, it is entirely possible that even a greater variety of colour was sought, as indicated by the unusual composition of Queen Shubad's cosmetics.

The oxides of lead, if originally added for colour, may have been converted to carbonates in the ground, thus accounting for the presence of carbonate and the absence of colour due to its presence, the carbonates being white. Regardless of the form in which this element originally existed, its presence in the cosmetic was a serious health hazard.

When the Museum's share of the finds of the Joint Expedition to Ur of the Chaldees was received it was felt that on the one hand the permanence of the various metal objects could be assured and on the other their appearance greatly improved were they subjected to study by those particularly trained in the subject of metallurgy and chemistry. The assistance of Dr. A. Kenneth Graham, of the Towne Scientific School of the University, was elicited and most



Silver beads from the corroded mass.

generously given. His care in carrying out the exacting processes which scientific knowledge indicated would be advisable, and his researches in the methods employed by the early smiths in fashioning the vessels, have been of the utmost value. The delicate little silver head of an antelope, for example, illustrated in Plate XVI shows what important works of art and early culture can be retrieved from apparently worthless masses of corroded metal, and how valuable to the archæologist is the coöperation of the specialist in modern scientific research.



Etched with $H_2O_2+CrO_3$.

× 75.

Microphotograph of silver from Ur. Taken from bowl.

In the present article Dr. Graham describes the technique and the particular treatment given a few of the more important pieces that benefited by his care. Those who visit the Ur Gallery will, we feel, view with added interest the pieces restored in the course of his work. Their beauty is greatly enhanced, their preservation is assured, and for all time it will be possible to realize how great was the mastery of these early metalworkers. It is but one of the many debts archæology owes, and will increasingly owe, to modern scientific research.

EDITOR.

GEM CUTTERS IN ANCIENT UR

BY L. LEGRAIN

"All the Babylonians," says Herodotus, who visited the land in the days of Artaxerxes Longhand, "have a seal and they carry a stick on the top of which is an apple, a rose, a lily, an eagle or some other figure, for they may not carry a cane or a stick without a characteristic ornament."

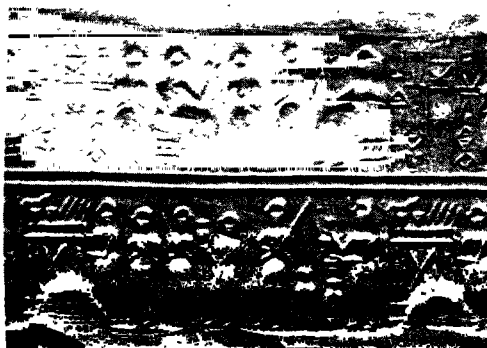
The Babylonian seals in the days of Herodotus were reduced to a conical seal with a characteristic ornament engraved on the base, or to a stone mounted on a ring. The older cylinder seal was fast losing its popularity with the passing of the cuneiform writing and of the clay tablet. But in the Sumerian Ur of Queen Shubad and long after her, the cylinder seal reigned supreme, and the scenes engraved on its surface by the ancient gem cutters, are for us a pageant of the old civilization, history, religion and mythology. Ritual scenes, hunting scenes, heroic hunters, the myth of light and darkness, farming and agriculture, the animals of the field, the plants in the orchard, court etiquette and temple worship are represented on so many seals discovered in the last three campaigns, many of them beautifully cut and several bearing historical names, that they bring pleasure and reliable information to the student of Sumerian art.

I. THE BANQUET AND THE SYMPOSIUM

The gods in heaven—or, for the Greek poet on the summit of Mount Olympus—drank the delicious nectar made of the honey of flowers and ate the ambrosia which gives immortality. Apollo played on the cithara his immortal songs, and Hephæstus moved about pouring wine. The Greek gods on Olympus had no more grace and dignity than Queen Shubad and her guests, no more elegant thrones and sideboards, no better cups than her gold fluted and engraved tumblers. Apollo's cithara was a poor instrument compared with her magnificent harps of gold and silver inlaid with bright stones and decorated with wonderful figures in the round. Shubad had singers and servants pouring wine or water from silver jugs into gold and silver bowls, she had a silver table and silver jars.



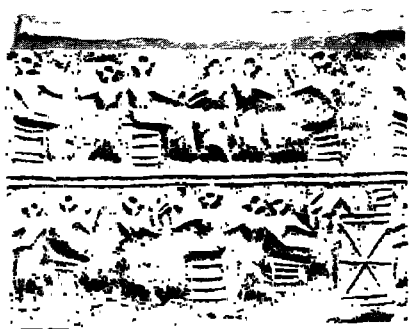
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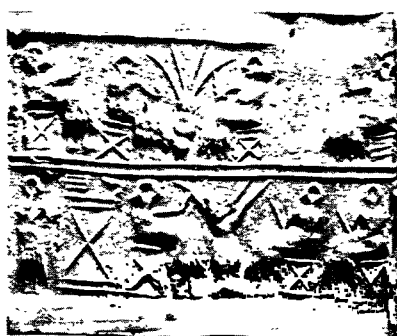
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Her food was not ambrosia but substantial loaves of bread, a leg of lamb, bowls full of various delicacies. She drank through a gold pipe covered with rings of gold and lapis delicious beer from a pointed jar planted in a support between the king and herself. The beer was made from barley. A brewer from Lagash used to sell it in leather bottles of from twenty to thirty pints' capacity. The queen had a three-pint skin imitated in silver, in which she preserved wine or a sweet liquor made of dates or of fermented honey. She used a gold or a silver strainer to catch the froth and the dregs, while filling the tumblers, and gold and silver lamps to light her banquets at dusk or far into the night. She lived well and dressed well. Her long hair was tied in a heavy roll on the neck with a silver or gold ribbon to which she might add a golden crown, a golden comb, a pair of earrings, a choker of gold and lapis, or a couple of necklaces with pendants. Her mantle of the finest woollen stuff, with long white flocks like a fleece, was thrown over the left shoulder and fixed under the right arm by a long gold pin, from which her blue lapis seal hung like a toggle. The men wore the fine woollen shawl about their loins in the Eastern fashion, the king being distinguished by a better and longer one. They were shaven and shorn, and removed their wigs, false beards and mantles before sitting at the queen's banquet of wine. They wore big beads of gold and lapis on a gold chain about their necks and gold bangles around their wrists. These were glorious times which the gem cutters never tired of representing on the two registers of the blue lapis seals so characteristic of Shubad's time, and which disappear with the passing of her golden age.

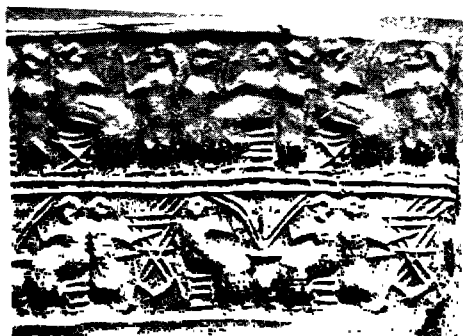
The queen's banquet was no simple human feast, but a solemn ritual banquet, worthy of being represented many times on the big lapis seals, as the best symbol of peace and abundance in the land. No god, in this remarkable period, was yet represented under a human aspect. Mythology was still playing with animal forms, and was giving them by degrees the human attitude, arms, and face. The divine power was then all invested in the king and queen, the high priest and priestess at Ur. When the gods later copied the royal style and borrowed crown, sceptre, and throne, the high priestess at Ur never ceased to be on earth the living Moon Goddess, sharing the golden bed of the god on the top of the tower and listening to his oracles in the night. The royal banquet of meat and wine became a regular sacrifice of food and drink. It was offered to the gods



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5



6



7



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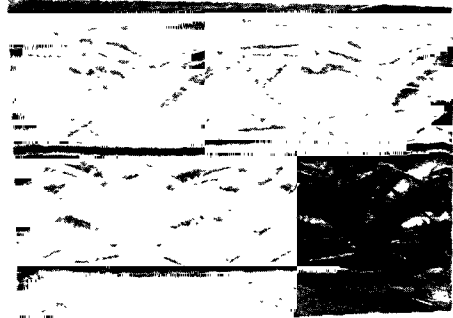
and disposed of by the priests. A solid altar of clay or bricks with a ledge replaced the elegant sideboard or cane altar of Shubad's time. It was planted before the god, like the low offering table, and was no longer carried about by a dog in the character of a butcher playing the part of a sacrificer, assisted by a lion-butler. The priests had developed into regular servants of the god. The golden pipes were no longer, or very seldom, used for drinking the sacred beverage. Instead of these, the libator poured a thin stream of water on green palms and bunches of dates in a vase placed before the god. Water is the life of plants, food and drink are the support of human life. The old banquet scene has its full significance in all religions, figuring the longing for life and the eternal cup of joy. The servants of the king became priests of the god. They used in their ritual the same spouted jug. They learned to cover their nudity, but their bald clean-shaven heads always marked them as slaves to the god, their master. The harps and the cymbals were not forgotten, but they no longer added to the royal pleasure or supported the recital of heroic deeds. In the courts of the temple they accompanied prayers and the singing of psalms. As a pious offering Gudea presented to his god a sounding harp and a state chariot. He had a limestone plaque carved in relief, like the one in the Museum, a memorial of his splendid gifts. Dresses also became more formal.

A true horned mitre, first with one, later with four pairs of horns, was devised as the proper headdress of the gods and of their attendants. Temple etiquette replaced the beautiful simplicity of old, when Queen Shubad tied her black hair with a golden band, or on feast days with strings of beads and floral ornaments of gold. While the king and his men had made themselves comfortable by removing their wigs and their beards, the gods now thought it below their dignity to appear without formal beards and long tresses of hair hanging down the back or tied up on the neck like a chignon, or in a heavy roll confined in a net. Dresses followed the common fashion. Pleated robes of linen, fringed and embroidered shawls of wool replaced the old kilt of kaunakes or the shawl of the same material, which the queen wrapped about her left shoulder and fixed below the right arm with a long golden pin.

The human faces on the blue lapis seals are poor examples of the engraver's art. They are reduced to a bald head with prominent nose and a large eye, which give them a bird-like aspect. The



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rendering of fine details is not easy in the soft lapis, and the gem cutters were mainly interested in the ritual meaning of the scene. Primitive artists, as a rule, are better at drawing animal figures than at sketching human forms, as will appear in the next wonderful series of seals. The small scenes engraved on the seals derive their inspiration from larger works of art like the inlay stela where eight persons are seated at the royal banquet of wine with songs and music. The eighth and last figure, isolated in the upper left corner by a gap in the mosaic, and, like the king, attended by a special servant, is probably the queen, the high priestess. The long lines of animals brought as offerings, and the gift carriers shouldering their burden, picture the abundance of peace time. The same servant carrying a sheep by neck and tail is found again on a lapis seal. The lamb or kid brought in the arms of the worshipper is a picture of all times. The three goats are found on many seals and plaque reliefs. The first has spiral horns and pendent ears, and is followed by two others with curved horns and ears erect. Their goatherd drives them with stick or whip. The inlaid stela with its scenes of peace and war is the oldest of a long series of memorials, like the stela of the vultures, down to the black obelisk of Shalmaneser. It is a monument to the victorious king of the old city-state. But the animal figures and the hunting scenes on the triangular ends of the inlay stela, and on one register, if not on two, of many lapis seals have a more primitive character than the war and banquet scenes. They are an echo of that legendary past when all animals and all plants were wild and when Gilgamesh the hero-hunter fought with the bison, the leopard, and the lion. The old heroic figures, modified with time, never lost their popularity to the end of Babylonian history.

Out of this rich fund of hunters' legends and characters, the old gem cutters selected as an alternative to the banquet and symposium a few scenes of animals crossed, rampant, or couchant, fighting or dominated by a spread eagle, or attacked by a standing or kneeling hunter. The spread eagle, not flying but seizing its prey, is a classical figure of complete possession and triumphant power, which needs no comment in a country where they still train hawks, falcons, and golden eagles to hunt wild fowl and other game. The same symbol with the same meaning still decorates modern standards. The kneeling hunter is a rarer and more interesting figure. He has one knee on the ground and one raised to steady himself while



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capturing an animal from behind. On old Elamite seal impressions he is armed with bow and arrows and his position is perfectly clear. On the lapis seal he closes on the animal and grasps it by tail and leg. A dagger seems to be his only weapon. On the gold diadem published in the *Museum Journal* for December, 1928, on page 380, he is attempting to catch a bearded bull. But the method adopted is not obvious. He may be using a snare or trying to cut a tendon. The kneeling figure is found again, this time with a rope in his hands, in another series of scenes which may throw light on the subject. A tame or captured bull is lying down peacefully chewing its cud. Above a gate adorned with a pair of wings is the emblem of the park closing on the cattle, as the eagle's grasp closes on its prey. The rope held by the kneeling hunter or keeper is attached to the gate. A second rope is held in the same manner by a seated goddess, mistress of flocks and herds. Corrals and nets to capture wild animals are the origin of the farmer's parks and pens. Such is the picture drawn for us by the old gem cutters of Shubad's time.

1. Lapis seal of Queen Shubad with her name engraved in linear characters. Banquet of wine and meat. This seal (U 10939), which belongs to the British Museum, and two other lapis seals of the queen are described in the first article in this number of the Journal.

2. Lapis seal of Abargi, possibly the son of Shubad, with his name in linear characters. The seal was found above the wooden wardrobe in her tomb. Banquet of wine and meat. Loaves of bread on the sideboard. U 10448, CBS 16727.

3. Lapis seal of He-kun-sig, a priestess of the divine Gilgamesh, with her name in linear characters. Banquet of wine in the upper register. The elegant thrones are again those of Shubad and her partner. Sideboard loaded with cups, bread, and meat, in the lower register. Vergers with staff of office introduce choice drinks. A servant holds a jug with a spout, and a saucer. Two pointed jars on a support. U 9315.

Bulls, fields, and a temple of the divine Gilgamesh are noted in business documents.

4. Lapis seal. Banquet of wine and meat. Loaves and leg of lamb on the cane altar. U 8615.

5. Lapis seal. Banquet and symposium. Four drinking tubes in a jar on a support between king and queen. Sideboard as above. U 10823.



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6. Lapis seal. Banquet and symposium. Four drinking tubes and a central rod in the jar on a support between the two partners. The cane altar again rests on bull's legs like that of Shubad. U 7985.

7. Lapis seal. Banquet and symposium. Two drinking tubes and a central rod in the jar on an X-shaped support. A servant brings two more curved tubes. Meat and cups on the sideboard. A servant carries a sheep by neck and tail. U 8367.

8. Lapis seal. Banquet and symposium. Four drinking tubes and a central rod in the jar on an X-shaped support. U 8119.

9. Lapis seal. Spread-eagle over crouching goats with their heads turned, and banquet scene. The eagle has palmlike wings and head in profile, in contrast to the lion-headed eagle of the harps with its face turned to the front. The sideboard has a new shape. Its upper part is like a grating. No food is visible on it. U 8656.

10. Lapis seal. Symposium and spread-eagle over crouching goats. The sideboard differs still more from the old model, and is empty of provisions. Spread-eagle as above. With the introduction of animal scenes, the banquet loses some of its interest, and is treated summarily. U 8461.

11. Lapis seal. Symposium and hunting scene. Four drinking tubes in a jar on a support. The sideboard has disappeared. Two lions crossed and rampant attack a bull and a lion. A nude hunter armed with a dagger takes part in the fight. U 8792.

12. Lapis seal. Banquet of wine and meat. Usual sideboard with loaves and leg of lamb. Hunting scene. Crossed lion and oats. A kneeling hunter attacks a bull. U 8643.

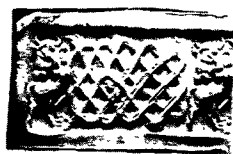
13. Lapis seal. Banquet and symposium. Regular sideboard with loaves, meat and cups. Two drinking pipes and a rod in the jar on a support. Two bulls are lying in pastureland on either side of a bush. A rampant lion attacks one of the bulls and is attacked in turn by the cowherd armed with crooked club and dagger. A seated figure and a servant complete the picture of pastoral life. U 8085.

14. Lapis seal. Hunting scene. Crossed lions, bulls, and goat. Hunters with daggers kneeling and standing. A scorpion. Clumsy symposium and banquet scene. Two pipes in the jar and only one drinker. New model of sideboard with cups. U 10822.

15. Lapis seal. Only hunting scenes. Lions over goats, the latter with heads down. Hunter with dagger. Scorpion. U 8714, CBS 17033.



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16. Lapis seal. Crossed lions and ibexes. In the small registers a spread-eagle grasping a large and a small ibex. A small kneeling hunter attacks a large ibex from behind. A scorpion. U 8290, CBS 16863.

II. HERO-HUNTERS

The beautiful seal of ^d Shara-ligir(?), the scribe of the queen—*dupsar-nin*—opens the series of heroic hunting-scenes. The subject is one of the most popular from the days of Shubad to the time of Mesannipadda, the first king of Ur, according to the official list of kings. But the gem cutters of Shubad were by far the greater artists. Their first clear, large, and deeply engraved composition was copied later with decreasing energy and artistic power. On the seal of Nin-tur-nin, the wife of Mesannipadda, it is reduced to a poor sketch of small crowded figures. Even the clear linear writing of old becomes uncertain. The age of Sargon of Agade will bring about a revival: new figures, clearer composition, firm cuneiform writing. These will form a new chapter: the Gilgamesh contests.

But here, as in the previous series of seals, there is still a natural grace, half-way between the realistic hunting scenes of Elamite inspiration and the classical compositions of the time of Sargon. The Elamite hunter is armed with bow and arrows, spear and hatchet. He chases the boar, lion, and ibex with a pack of dogs. He shoots standing or kneeling. The symmetrical heraldic composition of animals rampant, crossed and reversed belongs to Sumerian art. The Sumerian hunter triumphs in a fight hand to hand and uses the weapons of the inhabitant of the plain, dagger, club, and spear (*Museum Journal*, Dec., 1928, p. 387). He is nude, with his head in profile. His wild locks are drawn in the same manner as the hair of the ram, or ibex, or as the mane of the lion. He is clean shaven, and does not put on a beard while hunting. Even when represented in full face he lacks the formal beard of the classical Gilgamesh. The types of Gilgamesh and Enkidu were well known and finely engraved on the shell plaques of the harps, but were not all-prevailing. Here again the gem cutters are inspired by larger works of art, but with a style of their own. Nearly all their motives—lions, leopards, attacking bulls, goats, rams, ibexes, deer, the bearded bull with face turned to the front, the bull man Enkidu, the scorpion, and the snake—are found on the shell plaques decorating harps and gaming boards. But the hero is still the young human athlete



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attacking the lion, with the very dagger of Meskalamdug, or the leopard with the dagger and club. A net spread vertically is his new device for catching lions and bisons, a very interesting fore-runner of the relief on the Mycenæ gold cups.

The first four seals of the series are probably cut by the same artist. Three are inscribed. The second, a shell seal bearing the name of Lugalshagpadda, was found in the grave of Queen Shubad. It belongs to one of the grooms. Whether it gives a clue to the name of the queen's husband is not quite certain. Numbers five and six of the series belong to the same school and have the interesting representation of the net. It is tempting to see in the inscription Gig-hu-lugal, "the royal eagle", another royal name.

17. Seal of ^dShara-ligir(?) scribe of the queen. Rampant crossed lions attacking bull and upturned ibex—or ram? The nude hunter pulls one lion by the tail and strikes it with his dagger in the neck. His dagger is a copy of the gold dagger. Below the inscription, a leopard and a lion attack an ibex and a deer. Two crossed bearded bulls, the so-called man-headed bison, stand beside the inscription. U 9943.

18. Shell seal of Lugalshagpadda, groom of the queen. Lions attacking an upturned ibex—or ram?—and a deer. The nude hunter with the gold dagger is beautifully modelled. A scorpion in the field. U 10530, CBS 16747.

19. Seal of E-zid. Lions attacking an upturned goat with spiral horns and long hair, and an ibex with curved horns. Bull-man Enkidu with head in profile and holding a lance(?) with buckle. In the field a small upturned lion looks like a scorpion. U 11174.

20. Lions attacking a long-haired wild goat and a bearded bull. The hunter, with face turned to the front, is a Gilgamesh without beard. In the field a snake, a scorpion, a crouched goat, a dagger. U 11175, A.

21. Seal of ^dGig-hu-lugal. Lions attacking an upturned goat—or a ram(?)—and a bull(?). In the field two small crossed bulls. A Gilgamesh without beard lifts by the hind legs two lions caught in a net. U 8513, CBS 16869.

22. Net and bearded bull. U 11175, B.

23. Lions, upturned goat—or ram(?)—and bearded bull. The hunter lifts a spotted deer(?) by the hind legs. U 8141.

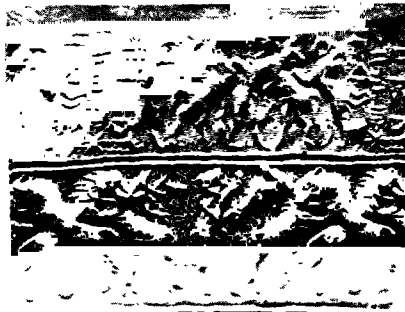
24. Lions, bull, goat, and bearded bulls. Two nude hunters, one in profile and one full face. U 9187, CBS 16871.



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25. Lions, leopard, bull, and bearded bull. The hunter is armed with crooked club and dagger. In the field a scorpion, two rampant gazelles, and an ibex. Also a quiver(?). U 7992.

26. Lion, leopard, bull, and bearded bull. Nude hunter with dagger. In the field a scorpion and a small lion(?). U 9027.

27. Lions, bulls, ibex, nude hunter with dagger. U 8494.

28. Lion, bull, nude hunter with dagger. A second group is formed of a bearded Gilgamesh with face turned to the front protecting a bull attacked by a leopard, which is attacked in turn by Enkidu. The bull-man is in profile, armed with a dagger. A long tress of hair falls down his back. We are on more legendary ground. U 9023.

29. Seal of Arad-^dBau, probably at the time of Nin-tur-nin. Two registers of small crowded figures. Enkidu between two bulls attacked by a lion, which is attacked in turn by a nude hunter. In the lower register two crossed lions attack a bull and a deer. The nude hunter has caught an ibex. U 8359.

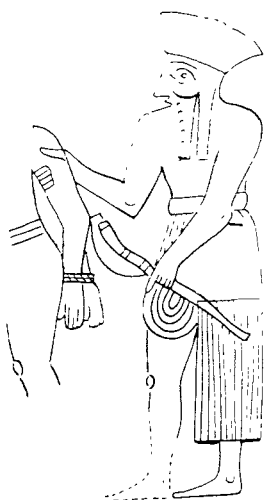
30. Lapis seal of Nin-tur-nin, wife of Mesannipadda, the first king of Ur recorded on the royal lists. Two registers of small figures. Gilgamesh(?) with face turned to the front between a bull and a goat attacked by two lions. Below, two crossed lions attack a deer and a goat with spiral horns. The nude hunter armed with a dagger helps in the fight. U8981, CBS 16852.

31. Two registers of small figures and emblems which announce the next or Sargonid period. In the upper register an ibex is attacked by a lion and a nude hunter with short hair. In the parallel group the nude hunter has the long tresses of Enkidu. In the second register the nude hunter wears the beard and the flat cap characteristic of the Sargonid period. Three lions attack two ibexes. In the field a crescent, a scorpion, a club or spear. U 9081.

III. GILGAMESH CONTESTS. THE SARGONID SCHOOL

The seals confirm the great importance of the reign of Sargon, king of Kish, founder of Agade, and of the Akkadian empire from the Taurus to the Persian Gulf. There is a new spirit in the land. The Akkadians are Semites. From their northern capitals Kish and Agade, new influences and inspirations spread over the Sumerian south.

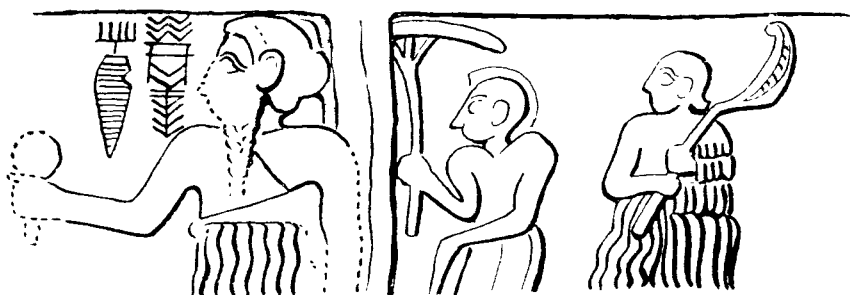
Enhedu-anna, Sargon's own daughter, was made high priestess at Ur, and brought with her the style and fashion of Kish. We



The Kish hero with long hair and beard, flat cap, kilt and battle axe. *Kish* Vol. I, Plate XXXVI.



Prisoner led by a soldier. Relief on the stela of Sargon.



Sargon, king of Kish and his retainers. Stela of Susa. Cf. *Revue d'Assyriologie*, Vol. XVI, pp. 65-74.

have a charming memorial of her, a disk of alabaster, pale, translucent, and round like the full moon. It was found in the court of the high priestess's palace at Ur. Her name is engraved on one side. On the other she is represented presiding at a libation poured by a priest in front of a stepped pyramid (*Museum Journal*, Sept., 1927, pp. 237-239). The scene belongs to the old Sumerian ritual with new Akkadian notes. The shorn priest holds by the foot the traditional jug with a spout, over the hourglass-shaped vase, but he is no longer entirely naked. The high priestess wears a long tunic of fleecy kaunakes, instead of the loose shawl thrown over the left shoulder. Her long hair falls down her back, but three braids, in the best Kish style, play along her cheek and rest on her breast. Instead of the gold band, she crowns with gold flowers and gold rings, she has tied about her head a diadem made of a rolled scarf. The mode will continue for many centuries. The stepped pyramid may be the smaller construction existing at Ur before the great stage tower of Ur-nammu. But the whole composition has a simplicity and elegance properly Sargonid. "Each figure is drawn separately with a complete value of its own on an open field, but is connected by gesture or attitude with a single religious action." The proportions are natural and lack the clumsiness of some of the later Gudea statues.

Besides the alabaster moon memorial, two seals of Enhedu-anna, one of her major-domo, the other—unfortunately broken—of her son(?) or minister(?), confirm the Akkadian influence of the new Sargonid school in the art of gem cutters. All have the same simple and clear composition, and avoid crowding or the crossing of too many figures. Instead of the Sumerian inlay stelæ with their large pageants, strangely alive and rich in details, the new ideal is that of the sculptor: a few figures in strong relief.

The old heroic contest with wild animals is still the most popular subject, but with a marked transformation in the character of the hunter and the choice of the animals. The leopard disappears. The deer is very rare. Mountain goats, ibexes, moufflons are seldom represented, and on a diminutive scale. The Akkadian of the plain is not familiar with the Elamite hills. The bison is replaced by the water buffalo. The legendary bearded bull of the time of Shubad, with a false beard tied under its chin, gives way to the inhabitant of the marshes, with the rugose, slanting horns. The so-called human-headed bull disappears. Its front face is given to the bull-

man Enkidu fighting with the lion. The older Enkidu had a profile head and fought not only with the lion but with the deer, the ibex, and the bearded bull. Gilgamesh full face with the classical three rows of locks and a formal beard is henceforth the prevalent figure. He is nude and wears a triple belt. The old hunter, nude like Gilgamesh, but with his head in profile, beardless and surmounted by wild locks, the Sumerian hero who attacked wild animals with club and dagger, is supplanted by the Akkadian hero, the man of Kish, distinguished by his flat cap, beard, hair on the neck, head in profile, belt and short loin cloth, embroidered and opening at the side. He is a sure index of Sargonid time and deserves careful study.

The hero of Kish with flat cap, long hair, beard, and loincloth is represented on larger monuments, and copied by the gem cutters. On the inlay panels of the time of Shubad, or slightly later, found at Kish, his loincloth is a regular pleated kilt, opening below the sporran, with one corner raised and tucked into the belt to leave the right leg free. The hero of Kish holding a nude prisoner—wearing only a belt and with hands tied behind his back—has the same flat cap, beard, and long hair as the hero grasping a bull on the seal of Adda, the major-domo of Enhedu-anna. Only the kilt has changed with time. The long pleated garment falling to the ankles is reduced to a plain short piece not covering the knee. The sporran is no longer used. The new loincloth has embroidered edges opening at the side. It was worn early in the south (*Museum Journal*, Dec., 1928, p. 386, No. 16). On the Kish panels the hero is armed with a remarkable battle-axe, seen again in the hands of Sargon's bodyguards on a stela from Susa (*Revue d'Assyriologie*, vol. XXI, pp. 65-74). The handle is a curved piece of wood, to which a crescentic copper blade is attached by rivets and bands. Such blades with rivets and gold bands were discovered in the Ur cemetery. Sargon's guards wear the short loincloth, which with the cap, beard and hair distinguish the new hero from Gilgamesh and Enkidu. He is a product of the Sargonid school, and a landmark of art. Even on the old inlay stela, the servants with short beards and plain loincloth embroidered only on the edge, may represent the early Semitic Akkadians, mixed with the Sumerians.

A few mythological figures are added to the hunting scenes: the Sun God rising over the mountains, the god of light fighting the power of darkness, the goddess of vegetation bristling with ears of barley, the hero Etana raised to heaven on the pinions of an eagle.



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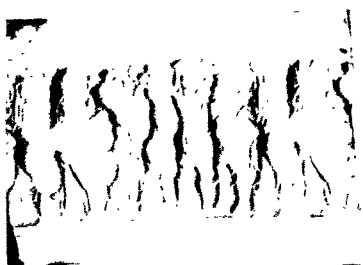
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They are the poetical expression of a natural philosophy, which will develop into formal ritual and theological teaching in the various temples from Sippar to Eridu. In the new empire the temples are gaining power, while the legendary hero-hunters recede into the past.

32. Black and white granite seal of Adda, major-domo (*pa-é*) of Enhedu-anna, high priestess, daughter of Sargon. The Kish hero grasps in his arms a bull attacked by a lion. He is armed with a dagger(?). So is Enkidu attacking a bearded bull. Enkidu is still in profile. He and the legendary bisons wear a belt. Two crossed lions. U 9178.

33. Fragment of a seal. Kish hero, lion, crossed bisons. The inscription reads: Enheduanna, daughter of Sargon; ^dIgi-du . . . is thy . . . (son, or minister?). U 8988.

34. Seal of Enki-endu, the scribe. The Kish hero and Gilgamesh fighting with bearded bulls. Both wear the same flat cap, a loincloth, and a belt, and grasp the handle of a short club or axe. The legendary bulls wear a triple belt. Enkidu and the lion. In the field a dagger. U 9764.

35. Second seal of Enki-endu, the scribe, perhaps of Enhedu-anna. The third line of the inscription is not clear. A new favourite and daring composition represents a pair of athletic Gilgameshes stepping on the necks of two lions which they lift by the hind legs. The helpless lions turn up their heads, roaring, ready to bite. A spread-eagle has caught their crossed tails in its claws. The whole forms a happy symmetrical motive, characteristic of the Sargonid school. Two crossed ibexes. U 9765.

36. The Kish hero and Gilgamesh tread on the necks of uplifted lions. The hero wears his usual flat cap and loin cloth, and Gilgamesh only a belt. The lions are back to back. Their lashing tails are crossed in the air. The seal is beautifully cut, probably by the same artist as the preceding, and has the same symmetry and energy of composition. The heads of the lions are a masterpiece.

A second scene, the undoing of Enkidu, is an amusing episode of the solar mythology. A hero of light with flaming wings pulls by horn and tail the unfortunate Enkidu, who protests in vain. The fight is over. He is captured and his club is broken. Enkidu, the friend of Gilgamesh, usually plays a glorious part as helper in the contests with wild animals. It is surprising to find him embodying the power of darkness and the brooding clouds. But there is no



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mistake about the hero of light, his victorious attitude, energy of action, the flames issuing from his body, his divine horned mitre. His opponents are generally heroes of the same type but nude and without flaming wings. Their broken clubs express their defeat. The long pleated kilt of the solar heroes savours of the Kish style, and may betray the influence of Sippar, another northern city devoted to the Sun God, who was only the son of the Moon God and a minor deity at Ur. This curious seal is another index of changing times. U 9717.

37. Kish hero between two wild animals, a goat with beard, tufts of hair at the knees, curved horns with nodosities and one antelope—or moufflon?—with shorter rugged horns, no beard, and smooth knees. A lion and a bearded bull. Two small motifs, a goat in a bush, and a beardless bull. U 9809.

38. A bull attacked by two Kish heroes. The second strikes the bull from behind with a dagger. Instead of a flat cap he wears a turban. Enkidu and the lion. U 9693.

39. The seal of Mu-lugal-gish(?). The Kish hero strikes from behind with an axe, or a crooked club, an oryx antelope which he has caught by the long straight horns, while a lion bites it in the neck. In a second group the same hero armed with a club has caught a deer in his arms. The figure of the deer and the linear writing prove the seal to be one of the older in the series. U 9661, CBS 16874.

40. Two bearded bulls with triple belt attacked by two heroes. One has the Kish flat cap and short loincloth. The other, nude, except for a belt, and with head in profile, short beard and hair, is the southern hunter in a new style—a would-be Gilgamesh. Enkidu carries in both hands the lance with buckle and pommel. In the field a crooked club and an arrow. The contests with wild animals and the fights of solar heroes have points in common. U 8993, CBS 16875.

41. Kish heroes armed with club and dagger, and bearded bulls. Tree of archaic type. Recumbent gazelles. U 7989, CBS 16864.

42. Kish heroes fighting with bearded and beardless bulls. Enkidu and the lion. In the field a curved club. U 9283.

43. Kish hero, lion, beardless and bearded bulls. Enkidu and the lion. U 7617, CBS 16877.

44. The Kish hero and Gilgamesh fighting with two bearded bulls. A new episode of the mythology of light. The Sun God rising above the line of a mountainous horizon. U 9321.



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45. The Kish hero and Gilgamesh, bearded bulls and lion. Enkidu and the deer, and a diminutive hunter treading on the animal's hind leg. U 9740.

46. Kish hero, Gilgamesh in profile, bearded bulls, Enkidu. U 9808.

47. Kish hero, Gilgamesh, and bearded bulls. Antelope between Enkidu and a lion. In the field, a snake and a scorpion prove the seal to be archaic. U 11112, CBS 16880.

48. The seal of Lugal-tug son of Lugal-ab. Two groups of Gilgamesh and a lion. Between them three ears arising from reedlike masses, usually connected with Nidaba, goddess of agriculture.

Mr. Woolley suggests reading instead of Lugal-ab, a proper name: son of the king of Erech: "One of the nameless kings of the second dynasty of Ur which flourished perhaps just at this time (the reign of Lugal-zaggisi, B.C. 2662-2638), and was crushed by Sargon of Akkad" (*Antiquaries Journal*, Jan., 1928, p. 25). U 8416, CBS 16870.

49. Kish hero and the lion. Lion and water buffalo. U 9652, CBS 16857.

50. Kish heroes and Gilgamesh treading on uplifted lions. Gilgamesh's head is in profile and he wears a loincloth. A tree in the field. U 9298, CBS 17012

51. Rock crystal seal of Urkhur ga-ab-di, servant of the goddess Innina. Two Gilgameshes. One carries a lion by neck and tail like a sheep. The second rides a water buffalo. A crouched antelope.

"The hole down in the centre of this crystal seal has been filled with red and white paste in such a way as to form a chevron pattern which is visible through the walls of the seal. There were copper caps affixed to the two ends." (C. L. Woolley, *Antiquaries Journal*, Jan., 1928, p. 25.) U 7953. Property of the British Museum.

52. Bulls and lions. Gilgamesh in Kish style breaks the back of the lion. He is armed with a club, or is throwing a rope round its neck. U 10355.

53. Seal of Aharrum, "the last one" (or Amurru). Gilgamesh and the buffalo. Enkidu and the lion. In the field a small seated dog, a crescent, a sun emblem: a cross with rays of light between.

54. Two groups of Gilgamesh and the buffalo. The inscription is erased. In the field two small mythological figures. The goddess of agriculture Nidaba seated on a stack bristling with ears of



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barley, and the hero Etana raised to heaven on the pinions of an eagle (Cf. *Museum Journal*, March, 1928, p. 7). U 9679.

55. Seal of Urgubba son of Lumakh. Gilgamesh and the buffalo. Enkidu and the lion. U 8666.

56. Seal of A ^dSin-dim, the cupbearer. Hunters and water buffaloes. Their heads are in profile. They have long hair, short beards, and woolly kilts of the Kish style, but no cap. U 10307.

57. Seal of Gimililisu, the priest of ^dGishrin(?). Gilgamesh and the buffalo. Enkidu and the lion. U 9567.

58. Gilgamesh and the buffalo. Gilgamesh in profile and the lion. U 7641, CBS 16861.

59. Gilgamesh and buffalo. Enkidu and lion. U 7656, CBS 16865.

60. Idem. The buffalo is shown urinating. U 9551.

61. Gilgamesh in profile. An adze in the field. U 9145.

62. Gilgamesh and the buffalo. Enkidu, the lion, and a second hunter. Bearded heads in profile with a band tied about the hair. A lance with buckle in the field. U 11152.

63. Hunter and bull. Enkidu and lion. Antelope, star, and crescent. U 7923.

64. Hunter and bull. Enkidu—shown urinating—a lion and a bull. U 10302.

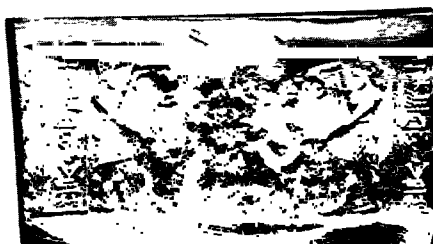
IV. THE MYTH OF LIGHT. THE HERO SHAMASH

Shamash, the young hero of light, opening the gates of dawn, rising at morn over the Persian hills armed with his golden saw, the divine archer who pierces with his golden arrows the powers of darkness, the mists and stormy clouds brooding over the mountains, who breaks men's backs or their clubs, pulls off their crowns or their beards and forces them to their knees, the triumphant warrior who passes at noon the tops of the stage towers, the great divider between day and night, the supreme judge from whom nothing is hidden, has always inspired Babylonian mythology. The magnificent language of the Psalmist rivals the art of the gem cutters.

The heavens declare the glory of God . . .
In them has he set a tabernacle for the sun,
which is as a bridegroom coming out of his chamber,
and rejoiceth as a strong man to run a race.



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His going forth is from the end of the heaven,
 and his circuit unto the end of it:
 And there is nothing hid from the heat thereof (Psalm XIX).

Shamash was worshipped at Larsa in the south and at Sippar in the north, the supreme court of the land in the days of Hammurabi. The famous Shamash of Sippara from Hammurabi to Nabonidus, was enthroned, sitting in judgment or receiving offerings. The morning Shamash, the fighting hero, was probably the god of Larsa, unless Sippara worshiped him in Sumerian times under the same aspect. Two figures of the rising god with flaming wings on one remarkable seal, provide grounds for the supposition. Both are placed high, the one between mountains, the other on the stages of a ziggurat. One lifts up his golden saw, the other lets his club hang. One wears the pleated kilt of Kish, open in front, with one end tucked in the belt, the other a short Sumerian kilt of kaunakes closing behind. Their crowns are different. One wears a mitre with one pair of horns and a central piece adorned with three small pairs. The second has no central piece but three pairs rising in pyramid form. The ziggurat has four stages supporting a tower-like construction. The mountain climber stands on a roaring lion—emblem of Nergal, god of Hades, the underground kingdom of darkness—and steps on the shoulder of his vanquished enemy, who is kneeling and crying for mercy. The presence of so many seals of the Sun cult and the doubled figure of Shamash on one seal in the Ur cemetery prove the growing influence of the north after Sargon.

65. Seal of Ezida the scribe. A solar deity introduces to the mountain god his fighting servants. All are bearded male figures and wear the same mitre with one pair of horns and a central piece. Their dresses differ. Shamash and the mountain god wear fringed shawls covering their left shoulders. Shamash has flaming wings, and a tree grows from the hilly seat of the mountain god. The servants wear only a kilt. The first, led by the hand, has a short kilt of kaunakes showing the knee and carries his curved club on his shoulder. The two attendants carry their clubs head down. Their kilts of woollen kaunakes or pleated linen fall to the ankles. A three-pronged fork in the field. U 11107.

66. Shamash the divider with flaming wings and golden saw sits in judgment. A worshipper is led in and introduced. Dresses and mitres express the difference in rank of the god, the attendants, and the worshipper. U 9292.



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67. Shamash and his attendants. He sits club in hand. Other clubs and a golden arrow—his emblem—are planted in the field. All wear the long pleated kilt after the Kish style, and the peculiar mitre with a central piece and two small pairs of horns between a larger pair. U 9851.

68. Shamash sitting in judgment, his gold saw—or club—in hand. The accused has been arrested and convicted. An attendant pulls off her(?) hair or crown. A verger precedes the worshipper, the just man in the case. Shamash is dressed in kaunakes, the others in pleated skirts. The starlike emblem of the sun is really a cross with undulating rays. U 9165.

69. The triumph of solar heroes. The bird of darkness and stormy clouds oppresses humanity. He tramples on a prostrate man, and holds under his hands two nude, kneeling, imploring figures. He is the robber bird-man Zu. Shamash of the flaming wings and of the golden saw shines through the clouds. He wears the pleated kilt of Kish style. One of his nude athletic servants breaks the back of the hero of darkness. His two arms and flaming wings surge above their receding line. Only the vanquished enemy has the mitre with a central piece. U 9026, CBS 16876.

70. The seal of Ur "Nidaba. The triumph of solar heroes. The god with flaming wings pulls the beard of his enemy and forces him back on the mountains. He has caught his club before he could use it. A second pair are wrestling. U 9310, CBS 17009.

71. Episodes of the triumph of solar heroes. The enemy loses his crown, is pushed back to the mountain, forced to his knees, and pulled by the beard. U 9060.

72. The divine archer, helped by Ishtar the goddess of war, pulls the hair and beard of his enemy after piercing him with his arrows and forcing him back to his mountain. An attendant wears the curious mitre with a central piece, perhaps an old Sumerian model. The archer with the pleated Kish kilt, curved Asiatic bow, and tasselled quiver hanging from his shoulder is a northern Akkadian of Sargon's time. So is Ishtar, full face, with a caduceus(?) in hand and clubs on her shoulders. Ishtar wears the kaunakes and her follower a fringed shawl. U 9694.

73. Shamash of the flaming wings and the golden saw seated in his shrine. Two attendants fling the doors open. They wear pleated skirt and fringed shawl. U 9100, CBS 16879.



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74. Shamash standing in his shrine. He and the two attendants wear the pleated kilt. In the field the golden arrow, his emblem. U 8699.

75. Worshippers at the shrine of Shamash rising over the top of mountains, with the usual saw and flaming wings. The bearer of a kid is the only one to wear a fringed shawl. The others wear the pleated kilt and the curious mitre with a central piece. The porter has his long hair hanging down his back. The libator holds the spouting vase. The main priest stands before the idol. U 8749.

76. Beautiful seal of the three gods: the two solar deities described above, and Enki, the god of Eridu. Enki sits in his shrine surrounded by water. He is a god of vegetation and commands the springs arising from the deep abyss. Streams and green branches issue from his shoulders. The little curtain on the top of the shrine may represent the waters from above. A kneeling Gilgamesh at the back winds his arm round the lance with a buckle, the *tarkullu*, solidly planted in the ground and marking the entrance. U 9750.

V. MYTHS OF VEGETATION

Grain and dates are the wealth of Babylonia. The immortal words of Herodotus are the best commentary on this series of seals.

"Rains are not frequent in Babylonia. The water from the river nourishes the root of the grain and causes crops to grow, not like the Nile by spreading over the lands, but by strength of arm and by means of machines, for Babylonia like Egypt is all intersected by canals, the largest of which carry boats. Of all the countries we know, this is undoubtedly the best and most fertile in the grain of Ceres. No one tries to grow fruit trees there. The fig tree, the vine, the olive tree are not seen; but instead the soil is so good for all kinds of grain, that it always brings two hundred times as much as is sown, and in exceptional years, three hundred times as much as it has received. Wheat and barley leaves are about four fingers wide, and though I am not ignorant of the height to which stalks of millet and sesame grow, I will not mention it, being persuaded that those who have not been in Babylonia could not believe what I have reported about the grain of this country. . . . The plain is covered with palm trees. Most of them bear fruit; one portion is eaten, from the other they make wine and date-sugar."

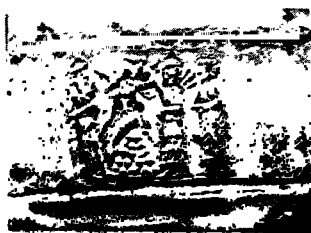
Gathering the fruit of the palm tree was mistaken, years ago, for a scene of paradise, but dates certainly were food for



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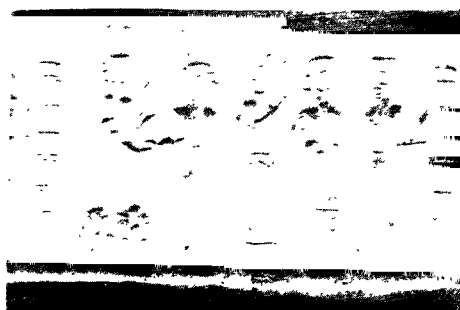
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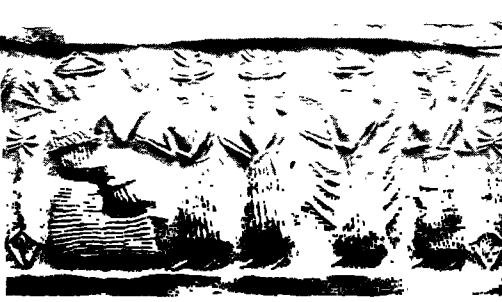
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the gods. Bunches of ripe dates placed in a vase with green boughs were offered to them. The scene is common from the days of Shubad to the end of the third dynasty of Ur. Short Sumerian figures, in kilts of kaunakes, sit at a feast and enjoy a cup of palm wine or honey, when the crescent announces the beginning of the harvest month. Later a ritual procession of priestesses in long dresses, wearing the horned mitre, advance toward a seated figure, which takes its meaning from the palm tree in the field. The crescent shines in the sky. Or a priest performs a libation in front of the seated goddess. The altar is a small table with a ledge. The crescent, a tree, and a star denote harvest time and offering. In former days the priest, entirely nude, poured the libation on palms and bunches of dates placed in a tall vase. On other archaic seals, offerings in the form of a bundle of sticks(?) are placed behind the vase. Ritual meaning and all formality seem absent from a charming group of a mother and child to whom servants bring dates and water.

Nidaba the goddess of wheat and Ashnan the god of barley were not represented as king and queen by the gem cutters long before the time of Sargon. They are picturesque figures dressed in kaunakes or in pleated linen, but covered with ears of corn, and seated on stacks of grain. The first green ears were solemnly presented in the temple. We see them in the hands of the high priestess, and a ceremonial plough in the hands of a priest, on the beautiful seal of Ursi, the distributor, or chief of cultivation; they are the servants of Enmenanna the high priest of Ur. The procession is led by a verger—probably Ursi—towards the seated god, dressed in the best style of the time of Gudea. His emblems are a star, a flag on a tripod, and a gazelle. He must be a solar deity. The rays of the sun are more important to the corn fields than the crescent of the moon.

77. Nidaba receives three worshippers, one of whom represents Ashnan, bristling with ears of corn like Nidaba herself. All have both hands extended, the pleated skirt, and the horned mitre with a central piece. A fourth attendant has a different attitude and dress. He carries in his hand two long stalks, and his skirt is of woollen kaunakes. An arrow is planted in the field as an emblem of solar deities. U 10397.

78. Three worshippers, one of whom represents Ashnan the god of barley, approach a bearded god armed with a club. A second



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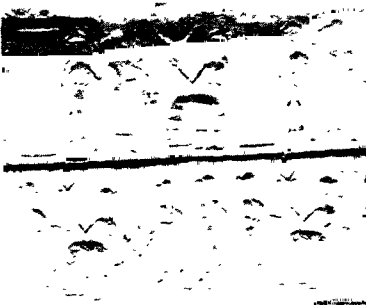
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club is planted in the field. Like arrows and stars they are emblems of solar deities. The crescent marks the beginning of the month of harvest. U 9158.

79. The seal of Ursi, the distributor, servant of Enmenanna, described above and in a foregoing article, page 236. U 9844.

80. The harvesting of dates on an archaic seal of the time of Shubad. In the lower register nude figures are cutting bunches of dates from the trees. Above is represented the ritual offering and the feast of the first fruits. Palms and bunches of dates are placed in the large vase between the seated priestess and her servants. All wear the old-fashioned Sumerian skirt. The priestess, distinguished by her heavy roll of hair, holds a cup full of palm wine. The crescent marks the beginning of the new month and the time of the feast. Behind the vase is shown the curious pile of sticks found in ancient ritual scenes. U 10323.

81. The month of the date harvest. A procession of three approaches the goddess seated on a large elegant stool. One is the worshipper; he wears a simple fringed shawl. Two are assistants, probably priestesses, in long pleated robes, long hair and horned mitre. A well cut palm tree with rugged trunk, having boughs and fruit, gives the scene its full meaning. U 9749.

82. Libation ritual at the beginning of a new month, probably a feast of the harvest of fruit. The ledge altar is placed between the seated goddess and the priest, who is pouring a liquid from a jug into a cup on the lower ledge. An assistant goddess stands at the back of the scene. She wears a pleated skirt, but has the same long hair and horned mitre as the chief goddess, who is seated below the crescent. The scene in the lower register is more human. The day star is on high. Altar and mitres have disappeared. The long tresses are tied in a roll on the neck. The green tree suggests an orchard. The three female servants approach the seated priestess with greetings. U 7956, CBS 16856.

83. Mother and child surrounded by three servants bringing offerings: one a bunch of dates, another a small jug hanging on a string. All are female figures, with the roll of hair tied on the neck. Nothing could be more human than this charming intimate scene. This carnelian seal mounted with two gold caps, belongs to a rich burial of the Sargonid period, 2700 B. C. With it were found a translucent calcite lamp decorated with a bearded bull in relief, three strings of beads, a gold diadem to be fastened with gold wire



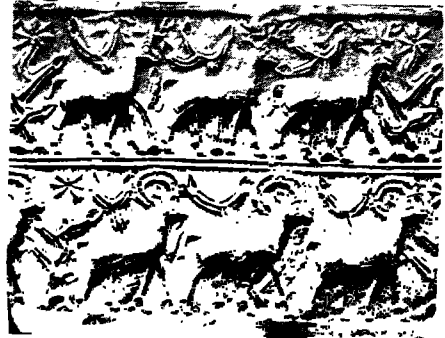
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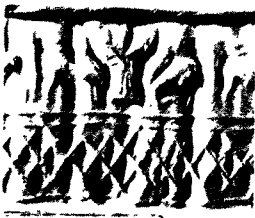
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across the forehead, a golden ribbon twisted round two tresses of hair above the frontlet, two gold bracelets, two gold earrings, three copper vases. U 10757, CBS 16924.

VI. WILD AND DOMESTIC ANIMALS

The old hunter took delight in the figures of wild animals: bulls, deer, ibexes, antelopes passing in long lines over the hills, amidst flowers and bushes. He never tired of having them engraved on his seals: a vivid picture of natural grace in proper surroundings. A more formal style placed symmetrically opposed figures on each side of a mountain, or arranged them rampant against the trunk of an Elamite pine tree. Spread-eagles and nets are the emblems of a successful quest, stopping the game and catching it alive. Antelopes and ibexes are seized in the talons of the powerful eagle, and bend before him on their knees. The wild bull is a captive in the byre, and the gate closes on him like the wings of an eagle. The cowherd pulls a rope to keep it tight. A protecting goddess of herds and pasture helps him. The hunter is giving place to the farmer.

The shepherd, whip in hand, leads his sheep and goats out of the pen. He is often followed by his dog. Strainers, pots, and jars for storing cream and milk, twelve round cheeses arranged on a wattle complete the picture of a well-kept dairy.

Geese, ducks and swans, or long lines of fishes are the emblems of the marshes and rivers so important in the south. Bau, the Mother Goose popular at Ur, presided over them. She had her statue in the shrine of the Moon Goddess. The fishermen liked her figure on their seals. At Diqdiqqeh, on the edge of the Ur canal, have been found two black diorite seals of Lugalushumgal and of his wife. He was interested in boat equipment or construction, and so was his father Urshul before him about the time of king Bur-Sin. Lugalushumgal married Nin-dingir, the priestess. On his seal a priestess leads him by the hand to the throne of the Moon Goddess. But swans adorn the seal of his wife who was probably a worshipper of Bau. With her we close the cycle of graceful myths derived from the worship of the natural forces of heaven, land and water.

84. Lines of gazelles with the long horns of the oryx. The two registers in inverse direction belong to a very ancient technic. Many seals of the same type were found in Kish. U 8388.

85. Lines of deer and ibexes in a landscape of mountains, plants, and flowers. U 9751.



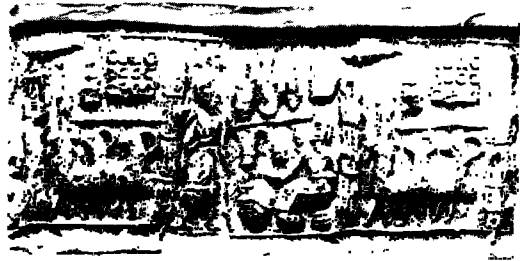
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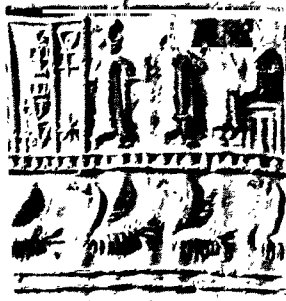
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86. Idem. Lapis lazuli seal. U 6133, CBS 16294.

87. Ibexes rampant arranged against a pine tree. Second tree in the field. U 8584.

88. Bulls passant in a mountain pasture. A bird is perching on high branches. A crescent. U 8169.

89. Bulls rampant among hills and pine trees. U 11123(?).

90. Spread-eagle over two gazelles. A net. U 7118, CBS 16288.

91. Idem. A star and a crescent. U 9051.

92. Idem. A crescent. U 9618.

93. Recumbent bull under a winged gate. A seated goddess and an assistant hold the rope which keeps the door closed. U 7909.

94. Curious scaraboid seal of glazed fritte. Two bull-men bring two crescent emblems on a pole to the enthroned Moon God. Each wears a triangular horned mitre and long hair tied in a roll. A bull passant below the throne is the emblem of the god. All the figures are deeply incised and schematic. The convex back of the seal is cut by a middle line and adorned with rings like the wings of a ladybird. It is hard to date this seal which was found in a grave outside of the city. U 7027, CBS 16301.

95. Dairy scene, like the famous Al'Ubaid relief and other examples of the same type (*Museum Journal*, Sept., 1924, pp. 167-168). The same goats, goatherd, jars, pails, buckets, cheeses on a wattle, and dairymen. A bird is perching on the gate of the pen. U 8385.

96. Ducks and fishes, the products of the marshes. U 8675.

97. Swans on the river. A female worshipper is led by the priestess to the throne of the goddess. The evening star shines on high. U 7664.

98. Idem. U 6065, CBS 16300.

99. Idem. Seal of Nin-dingir, the priestess, wife of Lugalushumgal. U 1268, CBS 15593.

100. A worshipper is led by the priestess to the throne of the goddess. He wears a fringed shawl, the priestess a pleated robe, the goddess a woollen kaunakes in good Third Dynasty style. Crescent and star emblems. Seal of Lugalushumgal, son of Urshul, by profession a "cutter," *tug-du-a*. The name of Urshul, in connection with the profession, is read on a tablet dated in the third year of King Bur-Sin of Ur. The profession seems to concern boat building and is mentioned along with carpenters and caulkers, *nagar*, *adkit*, *tugdua*, *sa*, *kugdim* on pay list of people repairing the boats



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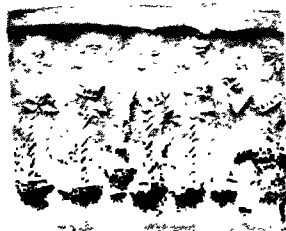
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of the goddess Nina and of the gods Nindar and Dumuzi. U 1257, CBS 15592.

VII. RITUAL SCENES

The banquet is the supreme manifestation of human joy. No festival without a banquet. None would approach the gods, courting their favour and bringing a request, without first rejoicing their hearts by the best offerings of food and drink. From the human banquet to the ritual sacrifice there is only a difference in mode. Both are essential to a religion of life, which is the gift of the gods and the desire of humankind.

"In those days, when king Ahasuerus sat on the throne of his kingdom, which was in Shushan the palace, in the third year of his reign, he made a feast unto all his princes and his servants: the power of Persia and Media, the nobles and princes of the provinces being before him . . . and they gave them drink in vessels of gold . . . and royal wine in abundance according to the state of the king." (*Esther.*)

The golden tubes and cups of the symposium, the sideboards and the offering tables loaded with bread and meat of the time of Shubad give way in the days of Sargon to formal processions of worshippers bringing a lamb, a kid, a cup of wine to the seated deity. A ledge altar and a vase with green boughs replace the old sideboard. The harps and cymbals are not heard or represented. The nude libator priest learns to dress properly. The attendants, servants of the god, or priests playing the part and wearing the horned crown, lead in the worshipper by the hand to introduce him, and adore the god in front of the idol in the inner shrine. Later, altars, tables, vases disappear. One emblem in the field is enough to give colour to the scene and personality to the god. The imaginative myths die out. At the time of the third Ur dynasty, the introductory scene has taken on a dull monotony. Influences due to new invasions produce scarcely more than a new dress, a new emblem of a freshly imported god. The glory that was Sumer is gone forever.

101. Symposium. A jar with two tubes between the two drinkers. A servant and a tree. U 9587, CBS 16948.

102. Symposium reduced to two seated figures, two tubes and a pot. Very small lapis seal. U —, CBS 15276.

103. Symposium. Two tubes in a jar between the two drinkers under a crescent. One servant. Dresses are long, plain or pleated, and posterior to the time of Shubad. U 9117.



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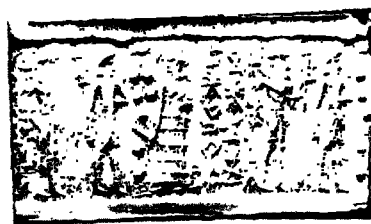
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104. A short tripod table loaded with food, cakes, and a leg of lamb, is placed between the seated goddess and the two worshippers. Crescent. U 11148, CBS 17598.

105. Banquet. Two seated figures and two servants. The bearded god under the star holds a cup. His beardless partner under the crescent pours a libation on the ground. Both wear kaunakes dresses, their hair tied in a roll, and no mitre. So does the servant in a fringed shawl. A second servant or worshipper wears the flat cap, hair, and beard after the fashion of Kish. U 9721, CBS 17024.

106. Symposium. A seated man holds a cup. A procession of four servants, one of whom carries a jar. All wear the same fringed shawl and roll of hair on the neck. U 8793.

107. Seated god, servant with cup and jar, and worshipper. A small table between two posts with buckles under a star figures the shrine. A crescent. U 9858.

108. Offerings to a seated bearded god, with long hair falling on his back. The servants bring one hourglass-shaped vase, a cup and a basket, a young kid, and a bunch of dates. The second has his hair curiously tied in a roll. U 9282.

109. Offerings to a seated bearded god. The priest wearing the horned mitre introduces the worshipper who carries a kid, and his wife with a pot of wine or cream(?). The small tree suggests a god of vegetation. U 8093.

110. Introduction to and worshipping of a seated god. The seal of Nin-rin, the diviner (*iskim*) of the god Utu-sib. U 9681.

111. Curious scene of a libation to the crescent standard of the Moon God, displayed on the body of a Gilgamesh engraved all round the seal. Between Gilgamesh's legs is a squatting monkey, and between his raised arms a spread-eagle. A libator holds a spouting vase over an hourglass-shaped altar. He stands on a brick pavement in front of a crescent on a pole. Gilgamesh with the spouting vase stands on the other side of the pole followed by a worshipper with clasped hands. A second crescent on a pole is planted between the libator and a standing goddess. A third crescent on a pole is supported by two crossed bulls. U 6002, CBS 16287.

112. Worshipper introduced by an assistant to the high priestess. The assistant holds a crescent on a pole. The priestess—in the part of the Moon Goddess(?)—holds a tumbler. The seal is inscribed to Shamash and to his wife Aa. In the field a small servant holds a



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big club; two nude fighters attack a dragon. This is an echo of the solar myth. The ampulla and libra in the field date the seal at about B.C. 2200. U 6698, CBS 16298.

113. Presentation to a seated god in good style of the third Ur dynasty. Inscribed to Ur-Shubula, son of Imera, servant of Zabarku. U 7625.

114. Libation to a western god, Dagan or Imera, carrying scepter, ring, and curved club, and dressed in Akkadian style. The libator follows the Gudea fashion of the intercessory goddess or priestess, the old Sumerian mode. Seal of Pesh-Dagan, son of Lumur-Imera. U 10407.

115. A worshipper brings a kid to Shamash. The rising sun is armed with a saw, has lost his flaming wings, and his foot rests on a recumbent bearded bull. Two servants follow a Martu god of Amorite style, with short dress and turban, and with club in hand, There are small figures in the field behind Martu: a Janus with two heads, an Amorite servant with libation cone and pail. U 6255. CBS 16306.

116. Shamash and Martu. Attitude and weapons are traditional but poorly cut. Gilgamesh holds a lance with buckle. In the field are the crescent and the seven stars of the seven spirits, perhaps the great bear constellation. Seal of Gummu-Sin, servant of the god Idpasag (Ishum?) and the goddess Ninkhursag. U 7524.

117. War scene. Assyrian charioteer and archers. The bowman in the chariot shoots at his enemy, while the driver holds the reins tightly to control the galloping horse. Crescent and star. U 775, CBS 15248.

VIII. FOREIGN SEALS

A few seals from Ur betray a foreign influence. Their interest extends outside of the old Sumerian land and connects it with India.

118. A bull passant with lowered head below an indistinct cuneiform inscription reading perhaps Ka-ku-shi(?). "It is a stamp seal, roughly rectangular, of grey steatite. The shape of the seal, the subject and the style are all those of the seals from Mohenjodaso in Sind, but in the place of the proto-Indian script we have here cuneiform of a type which would agree with a date of about 3000 B. C. The seal was found on the surface of the soil, some distance to the east of Ur, a little beyond the cemetery called Diqu-diqqeh. . . . This seal gives the first evidence for dating of the

similar Indian material." (C. L. Woolley, *Antiquaries Journal*, Jan., 1928, p. 26.) U 7623.

119. Bull passant with lowered head, below a group of what are perhaps the pictorial signs of a primitive writing: a scorpion, a fish, a pelican(?), a round point. Round stamp of grey steatite found in the Ur predynastic cemetery. U 8685.

120. Archaic human figure holding the horns of a bull. The head of the hunter is of the bird-like type reduced to one enormous round eye. The arms are filiform. The bull's head is a schematic triangle. The bodies of the hunter and of the animal are lost in rectangular or scutcheon-like forms filled with straight and crossed lines. It is impossible to decide whether they represent the skirt of the man, a net, the body or hairy skin of the bull, or large vases. White shell seal found in the predynastic cemetery. U 8575.

The seals which form this small but choice collection from Ur will do honour to the old gem cutters. They can claim age, beauty, and historical interest. *Parva domus sed apta.*

THE LOCK HAVEN EXPEDITION

BY D. S. DAVIDSON

THE Lock Haven Expedition of the University Museum was organized in June, 1929, for the purpose of investigating the archaeological sites along the western branch of the Susquehanna River and other regions in the western part of the state.

The archaeology of Pennsylvania, like that of the entire East with the exception of New York State, is practically unknown from the scientific point of view. It is true that the region is not rich in

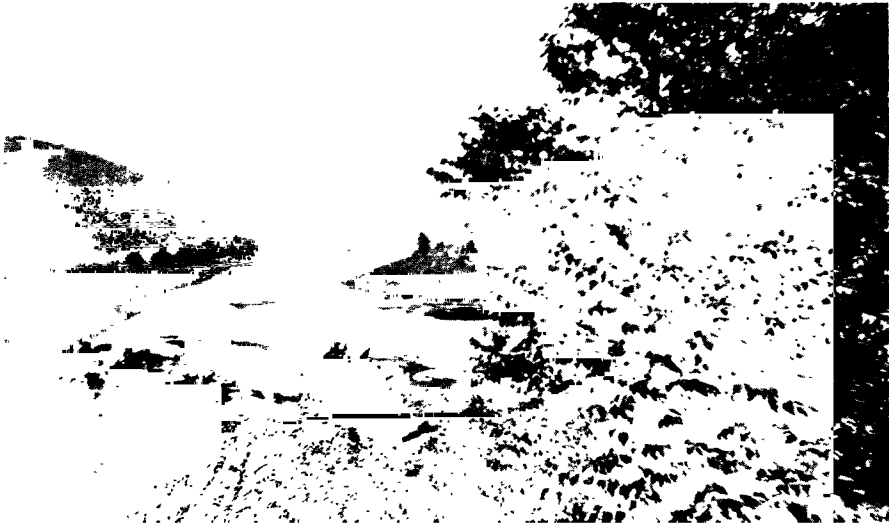


The Susquehanna River at Lock Haven, Pennsylvania.
The Bald Eagle Range is in the background.

antiquities in the sense that Mexico or our own Southwest is rich, and it is also to be admitted that it is possible to draw up a list of the kinds and varieties of artifacts which are found within the state boundaries. A list of relics, however, does not constitute archaeological knowledge in the modern sense of the term, for archaeological science now implies the determination of as complete a history of the people involved as is possible from the available data. The artifacts left by a people are not so important as the associations which they connote, and it is in this consideration that Pennsylvania archaeology is in a deplorable condition. Fortunately for us, our

neighbours in New York State have given considerable thought to the archæological problems of their region and, since Pennsylvania is somewhat akin, we have their knowledge to help us in our own endeavours. The fact still remains, however, that our contributions have been decidedly meager and, more important still, we must admit that in those problems which are distinctly local to Pennsylvania our knowledge is practically *nil*.

Before any attempt can be made to classify the cultures of the many different tribes which occupied Pennsylvania in historic and prehistoric times, we must first have at our disposal the com-



A view of the Susquehanna River west of Lock Haven.

plete records of the excavation of several hundred sites, including villages, camping grounds, burial places, rock shelters and the various artificial earth formations such as forts and mounds. All of these are found in the state and are associated at the present time with the general classification of Iroquoian, Algonkian or Mound Builder culture. It is of course well known that several Iroquoian and several Algonkian tribes existed here at various times, but our knowledge of their cultures is so rudimentary that it is impossible to say just what characteristics differentiated one from the others. In so far as the Mound Builders are concerned, we can say practically nothing.

Perhaps the greatest criticism we can direct against ourselves is our ignorance of the chronological sequence of occupation of this

region. It is accepted on sound evidence and logic that the Iroquoian tribes were the latest Indians to invade this locality and that they subdued and displaced peoples who spoke Algonkian languages who had lived here before them. Since this movement is con-



The "Jungle" on the Hayes Stewart Farm, Lock Haven.

A view taken in the "jungle" showing the heavy underbrush which has been allowed to grow since the June flood of 1889. Over one hundred test pits were sunk in the "jungle" but no evidences of the reputed graves were found.

sidered to have been quite recent—that is, within the last thousand years—it should not be a difficult task to obtain proof from chronological records in the ground. No one has accomplished very much in this direction, for the simple reason that a sufficient number of records do not exist for any satisfactory study. But chronology

should not be sought solely for the Iroquois and Algonkians. Until demonstrated otherwise, it should be considered possible by an abundance of evidence to establish a chronology of occupation for all the historic tribes and for a great number of the prehistoric peoples who must have lived here. The establishment of a chronol-



View of Pit No. 200.
Quiggle Farm, Lock Haven.

This view shows the western part of the pit after the surface had been cleared to the humus line. This part of the pit was shallow and yielded very few specimens.

ogy, therefore, should be the ultimate objective of research in Pennsylvania archaeology. For the time being, however, we must be content to confine ourselves to the laborious task of collecting data with the hope that in time the accumulation of facts will permit the perception of greater problems as the more local ones assume tangible form.

Lock Haven was chosen as the base of operations for 1929 for several reasons. In the first place, it is situated on the western branch of the Susquehanna River in a region which has received no systematic investigation. For many years the locality has yielded an abundance of artifacts, thus indicating either a long aboriginal occupation or a very populous one for a shorter period. Thirdly, Dr. T. B. Stewart of Lock Haven, who possesses one of the finest collections in the state, was instrumental in having this area selected because of the abundance of sites he reported as being worth investigation.

The Expedition took the field on June 29 and consisted of Dr. Mason and Messrs. Satterthwaite, McFarland and Lister. On July 4 Messrs. W. A. and Donald Ritchie, representing the Rochester Municipal Museum, joined the party, making the Expedition a joint one until their withdrawal on July 12. On July 6 Mrs. Dorothy Skinner of the Pennsylvania Historical Commission, which is conducting the Indian Survey of the State, arrived, remaining until July 20. Mr. Lister departed on July 13, followed by Dr. Mason and Mr. Satterthwaite on July 15, when Dr. Davidson assumed charge for the Museum. Miss Barber joined the staff on July 21 to relieve Mr. McFarland, who departed on July 25.

After the Expedition had established itself at Liberty, a small settlement about two miles east of Lock Haven, and operations were begun, an unforeseen difficulty was encountered. It was found that a region may be prolific in surface material and at the same time be a poor one for excavation. To make this point clear it is but necessary to describe the habits of the Susquehanna River in this locality. For many miles east and west of Lock Haven the Susquehanna flows through a deep valley formed by the Bald Eagle range on the south and the foothills of the Allegheny Plateau on the north. Each year the river overflows its banks in the spring and inundates the river bottom, which is generally quite flat. As a usual rule very little damage is done. Occasionally, however, a devastating flood occurs which completely sweeps away the humus in some places to pile up several feet of silt in others. These great floods have happened about once a decade during the last century and, as seems quite obvious, they have been instrumental in so disturbing the natural sequence in deposition that very few sites can be found which have not been disturbed to a considerable extent. Surface finds, therefore, which generally serve as a barometer for

excavations, cannot be relied upon in this region, for an abundance of surface material may have resulted from a "wash" from some higher elevation and may be superimposed upon barren strata beneath. On the other hand, a rich and valuable site may be entirely covered by a silt formation which of course gives no clue to the contents of the lower strata.

During the month of July the Expedition conducted work on three major sites and visited and inspected practically all the farms on which finds had been reported between Lock Haven and Pine Creek. In addition a few trips were taken to outlying regions.



View of Pit No. 200.

The same view as No. 2. This picture gives a better idea of the slope and bottom of the pit and also brings out the difference between the yellow clay subsoil forming the pit and the dark brown rich humus which has been excavated and thrown on the bank.

The first intensive work was started on the Munro farm about one mile east of Liberty, a small settlement where the Expedition was quartered. The farm is on the river bottom and is subject to frequent flooding. Some years ago, when the cellar for a tobacco shed was being dug, two Indian burials were found. The ground near the shed was surveyed and base lines established. About forty-five test pits were dug under the direction of Dr. Mason, but nothing was found to warrant the continuance of work. The site, known as Operation No. 1, was abandoned on July 2.

Operation No. 2 was the Hayes Stewart Farm, which adjoins the Munro farm on the west and which is at the confluence of

the Susquehanna River and the Bald Eagle Creek at the point where the forks of the river, divided by the Great Island, rejoin. The flood of 1889 had denuded a great part of this area and had exposed to view numerous dark spots in the subsoil. When two of these were investigated by Dr. Stewart, a boy at the time, he found them to be Indian graves. The owner of the farm, Dr.



View of Pit No. 200.
Showing the method followed in cutting out
the pit section by section.

Stewart's uncle, refused permission to excavate the burials and as a result they are supposed not to have been disturbed. Since the time of that flood the area along the bank extending inland for several hundred feet has not been farmed, but allowed to grow into a vast thicket as a protection against later floods. During the winter of 1928-1929 the owner gave his permission to excavate the graves and it was primarily on this information that Lock Haven was chosen as the seat of operations.

The grave sites had been seen in 1889 by three individuals who are still residing in the vicinity. They are Dr. Stewart, his uncle Hayes Stewart, and Ernest Moran. When these three conferred as to the location of the graves they found that the forest growth had destroyed their landmarks and they could not decide just where the graves had been. All agreed that they had been somewhere on the



View of Pit No. 200.

Illustrating the methodology followed. Each section was lettered and numbered according to a map prepared. Its extent, one foot square, was indicated and the section cut down by knife and brush.

ridge, but they could not be explicit within a quarter of a mile. Working under this handicap, Dr. Mason directed the sinking of about one hundred test pits, most of which were made in that part of the ridge now comprising a cornfield. No indication of the burials was found. After I relieved Dr. Mason I had over one hundred additional pits dug, all in the "jungle," as the forest at this spot is

called locally. No better success was encountered than in the corn-field. It is indeed unfortunate that more exact information could not be obtained, for the testing of the entire "jungle" would be a tremendous task and would require the services of a large labour force. The negative results of Operation No. 2 have been a great disappointment to all concerned.

The third main undertaking of the Expedition to date was the Quiggle farm, located at Pine, Pa., about six miles from headquarters. This farm is situated on a slope rising from the Susquehanna River to an elevation of about forty feet, where the tracks



View of Pit No. 200.

A closer view of the southeastern end of the pit in course of excavation. Specimens were found both under and over the large stones which are shown in place.

of the Pennsylvania Railroad are encountered. The higher parts of this site, therefore, are almost out of reach of flood waters and for that reason the site is considered as one of the most valuable of the neighbourhood from the Expedition's point of view. In addition to this encouraging feature, the field for many years has yielded a large number and variety of artifacts from the surface. Most of these have found their way into the collections of Dr. Stewart.

Operations on the Quiggle farm commenced on July 4 and ended on August 1. During that time over 250 test pits were sunk and several refuse pits excavated. Perhaps the most prolific pit was No. 200, which was partly excavated by Mr. Ritchie and

abandoned, but which the writer subsequently dug out to completion. Although the materials found have not been studied in the field, it seems safe to announce that bones of the deer, bear and the usual rodents were included. Mussel shells, tortoise shell and net-sinkers indicate other sources of food supply. Industrial tools



View of Pit No. 200.

This picture was taken along the northeastern side of the pit. The view shows the slope of the pit bottom and the sections which had not been excavated.

include bone awls, hammer stones and one polished celt or chisel found at the thirty-inch layer, the bottom of the pit.

To all appearances the pit represents the accumulation of refuse material over a great many years. All of the sections which I excavated or saw excavated were filled with charcoal particles from the bottom of the pit to the plow line. Although the char-

coal was thicker in some spots than in others, it was distinctly not found in layers. The indication was that it had accumulated in the course of time as the pit slowly filled with refuse and fire sweepings.

Pit No. 200, like some of the other pits on the Quiggle farm, yielded a great amount of broken ceramic ware. The fact that only broken pieces were found serves to emphasize the refuse character of the pit, for the distribution of sherds in situ gives support to the supposition that as clay vessels became obsolete or broken, they were tossed into the pit, where, upon striking a stone or the pit bottom, they rebroke into numerous small fragments.

The decorative features of the potsherds seem to indicate a number of types, and laboratory examination may show the presence of Andaste, Algonkian and Iroquoian forms. Perhaps the most important study to be made will be the attempt to determine whether there is a difference in type at various depths of the pit. Although we should not be too optimistic in expecting that a chronology may exist, it appears that such may be among the possibilities.

At first sight it may seem strange that, since the surface of the field has yielded such a number of good stone specimens, practically none were found below the surface of the ground. When it is recalled, however, that we are dealing with refuse pits into which usable objects seldom found their way, the result does not appear so illogical. The surface finds evidently represent the lost articles which were used near the hearths located away from the refuse pits. Evidently a person approached these pits only when something was to be discarded and this would explain the absence of the finer specimens in the pits. The only stone tool which I found in the pits is the small stone celt or chisel mentioned above.

It is unfortunate that no burials were found on this site. It is known that burials were made in the field, for two were discovered by the owner in 1913. Although a diligent search was made, the Expedition was unsuccessful in locating any.

Work on the Quiggle site was concluded on August 1. On Sunday, August 4, the public descended on the site and destroyed every pit which had not been filled in. Their devastating efforts indicate the importance of protecting unfinished work. Fortunately, we had finished just in time.

THE TEXAS EXPEDITION

BY J. ALDEN MASON

TEXAS, although the largest state in the Union, has been quite neglected by archæologists and therefore was chosen as the field of operations for one of the summer expeditions of the University Museum. The reason for this neglect is readily comprehensible: despite its size, Texas contains no ruins or archæological remains of outstanding interest. To the west lies New Mexico with its cliff houses and modern inhabited pueblos, the Mecca alike of archæologists and of Fred-Harveyized tourists. To the east are Louisiana and Arkansas with their burial mounds of former Indian peoples which afford pottery vessels of esthetic value. And across the Rio Grande to the south, although far to the south, lie the great ruins of Old Mexico, the work of the Aztec, Toltec, Maya, and the other great civilizations of America. Small wonder, then, that Texas has been a neglected orphan, with but a few of her native sons to take any interest in her remote past.

Yet such peripheral and intermediate regions as Texas are of great importance in archæological science, and only by their investigation can the true relationships of the higher cultures on either side be determined. When carefully investigated, Texas may be found to hold the key to many important problems concerning the relationships of the Mexican, the Pueblo, the Plains and the Southeastern Indian cultures. It was in the hope of shedding some slight light on these problems that several months were spent in this region this summer by the Museum Expedition.

The personnel consisted of Mr. Linton Satterthwaite, Mr. Charles Bache and myself; during the first few weeks we were also accompanied by Mr. E. B. Howard, and by Dr. Frederick Oldach of the Department of Geology of the University.

On July 22 the expedition arrived in Floydada, a small town in the southern Panhandle region of Texas, and there established its first headquarters. It was in the height of summer and the scorching dry winds swept across the plains like blasts from a furnace. Mr. W. M. Massie, resident agent for Mr. Howard's ranch in that vicinity, rendered us constant and valuable aid, for which



The bank of Clear Fork, near Albany, Texas.
To the left, Dr. Ray's excavation; the expedition's pit a few feet to the right.

we must express our great appreciation. This part of Texas is on the Staked Plains, the Llanos Estacados of the Spanish, to us a monotonous expanse of perfectly flat and absolutely treeless prairie, but to the agriculturally minded natives a "fine country." Until a decade or two ago it was unfenced cattle lands, ridden by cowboys, but today it consists of interminable fields of cotton, intersected by straight roads which require no grading.

Only a few days were spent around Floydada, for absolutely no information could be obtained concerning sites of Indian occupation.



The large rectangular site on Alibates Creek, Canadian River, Texas, before excavation.

Some there must be, but unfortunately no one in this region takes any interest in archaeology, and the sites in central Texas are so few and so unimpressive that, without information from interested residents, it would require many days of search to locate one. The same situation exists over all Texas, and is true of most regions throughout America. In one town one or two men with antiquarian interests will know of a score of sites within fifty miles, while in the next town everyone questioned will insist that the region is utterly bare and that one should go to Pecos, to Pueblo Bonito, or to some other far-away place of which he has read in the newspapers.

So three days later, after purchasing a used Chevrolet truck which we christened Amaryllis, after Amarillo, the metropolis of the Texas Panhandle, we left Floydada, and arrived that night at the city of Lubbock. In this part of Texas even the national interstate highways are rarely paved, but except during and just after rains they are kept in comparatively good condition by frequent scraping. The making and upkeep, however, of even these few and poor roads must be a great problem to the state, as the mileage is great and the population very sparse.



Southerly corner of rectangular house, Alibates Creek.

A westerly view from outside the walls. The stones and slabs are set in or upon a cement-like base.

At Lubbock we were welcomed by Dr. Holden of the West Texas Technological College and viewed the archæological collections which he has inaugurated there, but as he has resided in that district only a short time we were unable to learn of any sites in the vicinity and proceeded to Abilene. Although Abilene is probably no richer archæologically than most sections of Texas, it is the headquarters of the Texas Archæological Society, owing to the residence there of a small group of enthusiastic archæologists, led by Dr. Cyrus N. Ray and Mr. E. B. Sayles. Dr. Ray took us to, or directed us to, many sites on which we made small collections of arrowheads, scrapers and similar

artifacts. The culture here is rather rude and certainly of the type of the plains. Fragments of pottery and artifacts of smoothed stone are exceedingly rare, but there seems to have been some differentiation either of tribal or of temporal occupation, for the artifacts from all sites and the situation of these sites are not uniform, but are distinguished by the local archaeologists by such terms as "sand dune sites" and "small scraper sites."

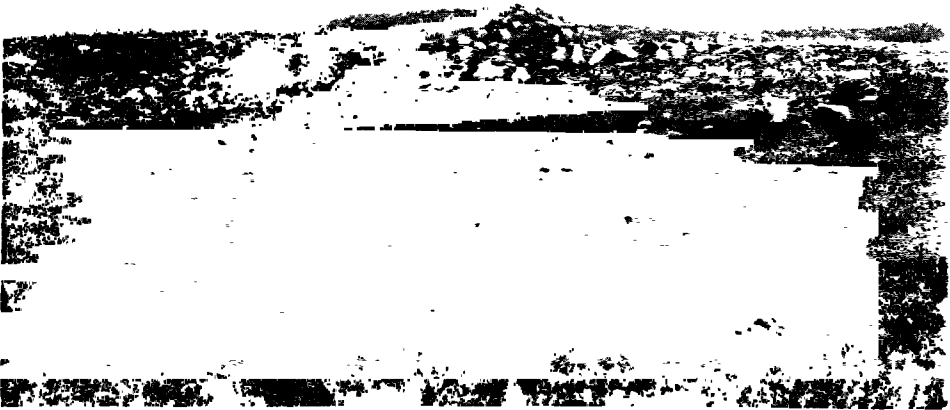


Rectangular house, Alibates Creek.

A southerly view of the same corner. The floor appears in the foreground. Beyond it, to the left, is a puzzling hollow structure, purposely broken through. From its flat top, or roof, rose a mass of "cement" and stones nearly to the top of the wall on the left.

On the banks of the Clear Fork of the Brazos River north of the town of Albany Dr. Ray had excavated two skeletons which he described in the *Scientific American* last spring. They were excavated from the cut-bank of the river, some thirty feet above present water level and about six feet beneath the surface. The soil above appears to be undisturbed and stratified. These remains have not yet been examined by expert anthropologists, but Dr. Ray believes them to be unusual in some respects and of great age. Since the problem seemed an important one, the first piece of extensive archaeological work was begun here by the expedition. A cook was engaged, camp pitched, and excavations made from July 30 until August 3. Instead

of digging in from the bank as Dr. Ray had done, a pit was sunk from the surface a few feet from the site of his find. The soil was extremely hard baked and the temperature terrific, so that it took the combined efforts of the five of us to dig carefully a pit eight feet square and deep during this period. The soil was almost certainly naturally deposited, stratified and undisturbed. At the depth of about four feet a rude arrowhead was unearthed, at six feet several scrapers, and at eight feet, just as the work was being abandoned because of the obviously undisturbed and sterile nature of the earth, a piece of



The mound at Alibates Creek site.
Note the lines of flat stones set on edge at the right centre.

bone three or four inches in diameter was uncovered. It was apparently a fragment of a human cranium, probably somewhat mineralized and presumably of considerable age, obviously deposited there by natural means and not buried. The bone still awaits examination by a somatologist. I fear it is too small to allow exact determination regarding the physical type or archaic characteristics of the individual. The degree of mineralization may afford some data on its age, but both the rate of this process and that of the deposition of the overlying soil vary so greatly with natural conditions that it is to be feared that they will permit no definite determination.



Excavation in the mound, Alibates Creek site.
Several floor levels, one laid over another, are plainly visible. The six-foot rule stands in
one of the mounds left by a decayed house post.

From Abilene we turned north again. Stopping for a day near the town of Rotan, we excavated a grave to which we were conducted by Mr. Louis Miller of Rotan and Mr. James Latham, a ranchman with antiquarian interests. The skeleton was found, but it was much dessicated and fragile and accompanied by no objects, obviously a burial of a member of one of the groups of plains Indians. Proceeding through Floydada again, where Mr. Howard and Dr. Oldach left us to pursue geological investigations, we drove north to Amarillo.



Mound ruin, Alibates Creek site.

Another view of the superimposed floors, after further excavation.

About forty miles north of Amarillo is the Canadian River, the largest stream in northern Texas. It is also the only river which, flowing eastward to the Mississippi, rises in the mountains of northeastern New Mexico. Certain of its headwaters, especially the Mora River, rise near the headwaters of the Pecos and close to the present pueblo of Taos. It would thus be expected to be the route of intercourse and trade between the inhabitants of the pueblos and those of the plains. That it was actually used for this purpose is indicated by the discovery, on the slopes of the bare hills lining Palo Duro Creek fifteen miles south of Amarillo, of small bits of

pottery representing most, if not all, of the types of pottery found at the ancient pueblo of Pecos near Santa Fé. This pueblo has for fifteen years been undergoing excavation by the Department of American Archæology of Phillips Academy, Andover, Massachusetts, under the direction of Dr. A. V. Kidder. That the former habitants of Pecos journeyed so far east is thus established, but since no ruins of pueblo type are found in this region, it seems most probable that these potsherds represent merely temporary camps of the Pecos



Mound ruin, Alibates Creek site.

Notice the rounded curb at right, running back to a large post-hole. At the lower centre a segment of the fireplace has been uncovered.

people while on expeditions to hunt bison. Close to this site is the town of Canyon, the seat of the West Texas Teachers College, where Mr. J. E. Haley has established a small museum of history, archæology and natural history.

Around Amarillo, as everywhere throughout this region, are also found the camp sites of the nomadic Indians who occupied this country at the time of the historic occupation. These camp sites yield artifacts in the form of chipped and flaked flint, arrowheads, spearheads, scrapers, knives, and fragments of pottery, though the

latter are of a type different from and ruder than the pottery of the pueblos. Artifacts of smooth stone are practically unknown, but grindstones known as "metates," which resemble somewhat the stones for grinding corn used by the agricultural Indians to the west, and the hand mullers or "manos" which were used on them, are common. It is not certain whether these tribes actually cultivated a little corn, or whether the metates were employed for grinding seeds or other natural products. At any rate, their use probably indicates a cultural influence from the pueblos to the west.



Indian rock engraving, on Grape Vine Creek, near Adrian, Texas.
Awarded first prize by unanimous vote of the expedition.

But along the Canadian and especially on the short creeks which flow into that river are found the houses of a people whose culture was apparently restricted to this region; they seem not to be found east or west of the Texas Panhandle. This culture seems to have been a blend of pueblo and plains elements, and deserving of more attention than has heretofore been paid it. A decade ago Mr. W. K. Moorehead of Phillips Academy, Andover, made some surveys through this region, but his reports have not yet been published. One of these groups of houses on Wolf Creek, known as Handley's Ruins, has been given some publicity in the public press,

but no careful report on any has ever been published.¹ The investigation of this culture, therefore, was one of the principal objects of the Museum's expedition.

Mr. Floyd V. Studer of Amarillo gave most freely of his time and aid to the expedition, and to him the Museum is deeply indebted. Among other places, he conducted us to a site on Alibates Creek, north of Amarillo, where we made camp in a deserted ranch house and worked from August 9 until August 19. On one of the hills overlooking the broad low valley of the Canadian are dozens of



The rock shelter on Grape Vine Creek.

rings and a few rectangles made of stones, laid flat or placed on edge. These probably represent the walls of semi-subterranean houses, the superstructures now fallen in and the rooms filled with soil. A few artifacts were picked up on the surface. On an adjacent hill are a few more similar sites which were chosen as the expedition's scene of labour. Three sites were partially excavated, a small round ring, a large rectangle and a small hillock with many stones placed on edge. The former revealed nothing of importance. The rectan-

¹ Since this report was written, the first issue of the *Bulletin of the Texas Archaeological and Paleontological Society*, Vol. I, Abilene, Texas, September, 1929, has appeared. Among other interesting articles are one by Dr. Ray and Mr. Sayles on the Abilene region, and one by Dr. Holden on the Canadian River district.

gular site was partly excavated by Mr. Satterthwaite, with help from Mr. Bache. It was outlined by a rectangle of stones, mainly placed on edge, which were found for the greater part to be embedded in a hard material made, apparently, of a lime cement. The flooring was of the same material, but the arrangement was too unusual and intricate to be here detailed.

The site partially excavated by myself and Mr. Bache was of different type. It had already been dug into by some oil-field



Painted pictographs in the Grape Vine Creek shelter.

The engraved symbols do not show. Many of them are on the underside of the projecting ledge.

employees who had run a pipe line across the hills, by Mr. Studer, and by Dr. R. L. Olson of the American Museum of Natural History, New York City, who this summer preceded us in visits to many places. On one side of the hillock a room had been partially excavated, the walls of which were marked in places by long vertical stones of natural shape embedded in the walls, visible for a few inches above the soil and extending as far as two feet below the surface. This room was not further excavated. On the other slope of the mound another room which had been partly excavated was continued until the important features were determined.

The room measured about fifteen feet in diameter and was mainly rectangular, though one corner was rounded and one side may have been curved. Built in the side of a mound, the upper floor was at the ground level on the lower side of the mound, but about four feet below the surface at the crest. The underground walls were of adobe or mud, but were solid and not built of adobe bricks as in the modern Mexican style. Most of them were blackened by smoke. Although the walls were not very much harder than the



The "Horned Serpent," Grape Vine Creek.

The head and body are about ten feet in combined length. One may add or deny a tail in accordance with his own judgment.

material which had filled the abandoned room, the fill broke away from the walls with a clear cleavage. In this room no stones were set into the tops of the walls as was the usual practice. A number of different floor levels were noted, the lowest being two or three feet beneath the uppermost. These floors were apparently made of hard packed clay or mud over which was laid a thin film of plaster. In the centre of the house on the uppermost floor level was a rather deep conical depression with a few large stones and a large quantity of packed ash in it, undoubtedly the fireplace. Similar fireplaces would doubtless be found in the lower and earlier floors, but for the greater part

the upper floor was left intact and was broken through to the bottom in only one place. The area of the fireplace was marked by a depression of probably six inches in the floor which dropped in a rather abrupt curb with rounded edges. At four points at equal distances from the fireplace were holes in the floor, which details showed plainly represented the posts which upheld the roof. Above most of the floors were found charred beams turned to charcoal, clay burned to brick bearing the imprint of small poles or reeds, and carbonized grass.



A closer view of the Grape Vine Creek shelter.
The human figure with upraised arms is of especial interest.

The deductions from these data are evident. The house consisted of a room partially underground, the walls and floors made of clay faced with plaster. The roof, which rose to an unknown height above the surface, was supported on four posts placed in the interior of the room and consisted of cross poles with a straw thatch above this and possibly a covering of mud. The walls above ground may have been of the same construction as the roof or of solid adobe. The inflammable nature of the building led to frequent conflagrations during which the roof was destroyed and fell to the floor, partially filling the room. Instead of cleaning



Engraved petroglyphs on Sapello Creek, near Watrous, New Mexico.
These have been incised, presumably with a sharp stone. The lines are wide and shallow.

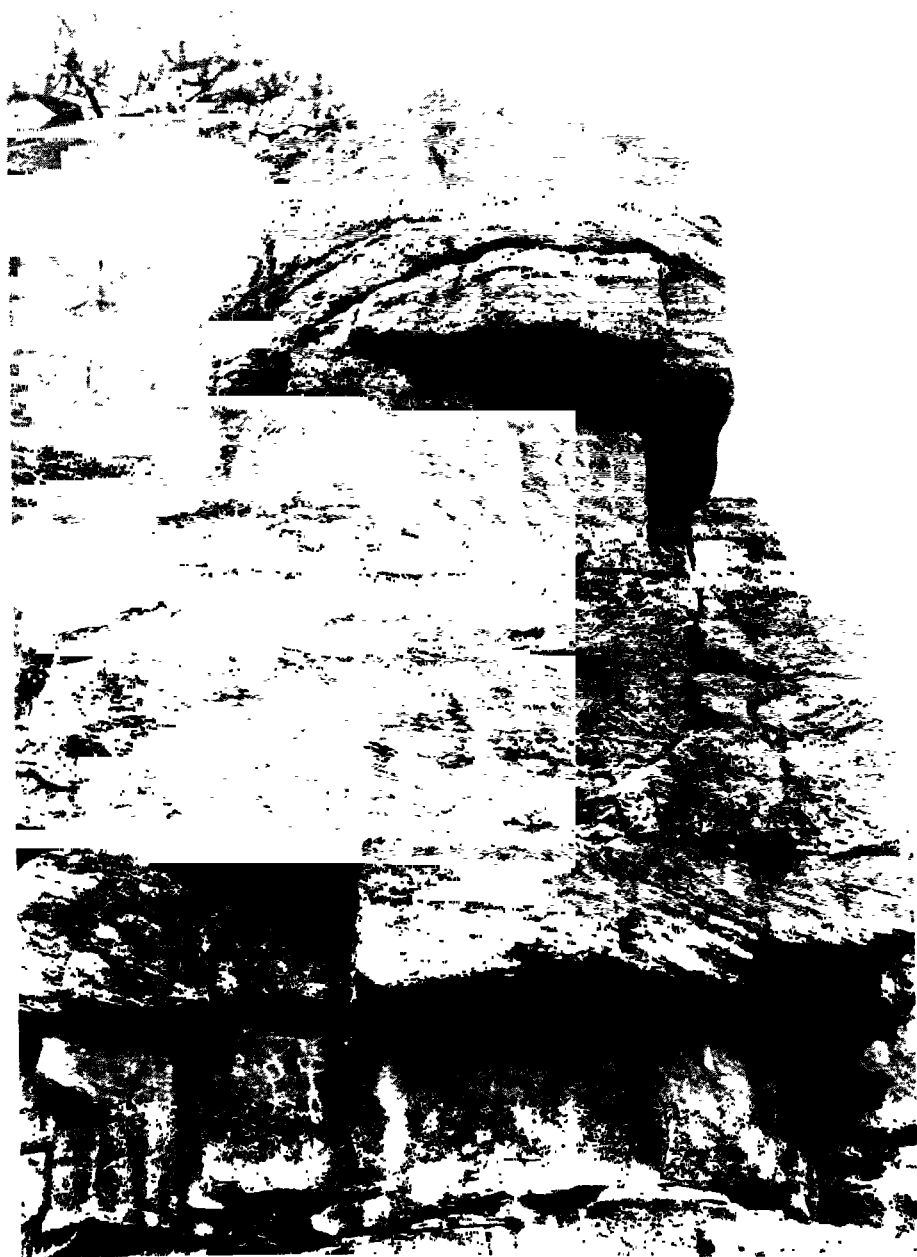
the débris out to the level of the original floor, it was packed down, leveled off, and a new and higher floor made upon it.

Very few objects of any value were encountered in these excavations. Flaked flint implements were in the majority, most of these made of a banded red and white flint which is peculiar to this region and a few specimens of which, determined by him to be of extraneous origin, were found by Dr. Kidder during his excavations at Pecos. A very few potsherds were found and one small ornament of shell but no artifacts of smoothed stone. Some bits of the larger and better preserved carbonized beams were saved in the by no means optimistic hope that the age of them might be determined by a study of the annual rings, a system which has been developed in recent years by Dr. Douglass of the University of Arizona and which promises eventually to afford an accurate time scale for American archæology. In this same room Mr. Studer excavated what appears to be a piece of carbonized matting.

All of these artifacts, including the pottery, resemble those of the Plains Culture far more than those of the Pueblo. But the architecture is strikingly Pueblan on the whole, resembling decidedly that of the semi-subterranean rooms of the Post-Basket-Maker or Pre-Pueblo peoples. The culture is therefore probably a hybrid and intermediate one and deserves more attention than has hitherto been paid it.

Another site of this same culture was observed further to the west on the Canadian and to the north of the town of Vega. Here are a large number of house sites crowded together on the top of a steep-sided mesa, obviously for protection. They may therefore be of a period subsequent to the building of those on Alibates Creek, which are open to easy attack. On the slopes of this mesa are pockets in which were found quantities of animal bones, refuse from the houses above, and on the slopes and at the bottom of the mesa quantities of pottery fragments were picked up.

We were due to attend the conference of archæologists at the pueblo of Pecos on August 23 and so returned to Amarillo and motored west towards New Mexico. The greater part of one day was spent on Grape Vine Creek, north of Adrian, Texas, where a cave or great overhanging rock shelter contains many pictographs. Some of these are incised in the rock and some painted in red and black colours. These were photographed, drawn and rubbed. Most of the figures represent animals and human beings, the largest and



Carvings high up on the cliff, Sapello Creek site.

most impressive one being apparently of a horned serpent, done in black and red. While my impression is that the incised petroglyphs are older than the painted ones, this may not be a valid conclusion.

Amaryllis, despite four flat tires in twenty miles, brought us into Pecos in time for the conference, which was attended by most of the anthropologists then in the West and which lasted for three days. Then a pleasant week-end was spent in picturesque Santa Fé. On the way to Las Vegas we visited Tecolote, a Pre-Pueblo site excavated this summer by the archaeological students of the Anthropological Laboratory at Santa Fé, and there made a small collection of potsherds.

It was our intention to spend considerable time on the Mora River, the largest affluent of the Canadian in New Mexico, with the hope of finding there some ruins of the Texas type. We proceeded first, therefore, to the town of Mora near the headwaters of this stream, a delightful old out-of-the-way New Mexican town where Spanish is heard far more than English. It is hardly possible that there can be no Indian ruins in this fertile valley, but none was known to the residents and we returned to Watrous, a small town at the confluence of the Mora River and Sapello Creek. Here Mr. Reynolds gave us kind assistance and showed us some mounds on the bank of the Mora on which potsherds are frequently found. Although it was not our intention to work upon sites of pueblo culture, we could not resist a few days' work here and so excavated from August 29 until September 7. In architecture the site somewhat resembled that on the Canadian, the underground walls and floors being made of adobe mud, but less smooth and finished. However, instead of enclosing single rooms, the walls were partitions between rooms, and the group on the mound excavated consisted of a dozen or more. The same superposition of floors was noted and the same charred beams and lumps of fire-baked clay with the impression of poles or reeds. The latter were unusually frequent, the charred beams rare. In contradistinction to the Texas site, potsherds were common and flaked implements very rare; the country evidently did not produce much flint. The pottery was of unmistakable Pueblo type, mainly black corrugated ware but with a fair quantity of painted black on white and a few pieces of black on red.

A site of somewhat different construction was visited upon the top of a mesa known as Loma Parda, a secluded New Mexican village



A closer view of the symbols on Sapello Creek.
The lines are not deep enough to cast a shadow and some have been weathered to the colour of the surrounding surface, almost invisible to the eye.

not far from Watrous. Here were found the lower courses of what were apparently low walls of piled stone. An excellent metate and several perfectly shaped manos were secured here but no excavation was done. Near the mouth of Sapello Creek we were shown rocks covered with incised pictographs which we photographed and drew. They resembled considerably those seen on Grape Vine Creek in Texas and probably were made by the same people.

We entertained great hopes concerning the region at the confluence of the Mora and the Canadian rivers, near the little village of Sabinoso. This lies far from any high road at the bottom of a deep canyon and the steep rocky trails gave Amaryllis a punishment from which she will never fully recover. We found Sabinoso to be about as unamericanized as any place in this land could be. No sound of radio or of phonograph, no movie posters or cigarette billboards, no word of English but our own, only the little scattered adobe houses with strings of scarlet chiles hanging from the roofs, and orchards of delicious apples and peaches. But none of the population knew of any Indian remains in the neighbourhood with the exception of arrowheads to be picked up in some places, and so we could not tarry there long. With two of us pushing behind over the worst places, we succeeded in getting Amaryllis out of the canyon. A picturesque little place, Sabinoso, but one not to be visited by anyone who treasures his automobile.

The next day took us to Tucumcari, a small but bustling city, largely a health resort. But it suffers from the lack of an archæologist and we could learn nothing concerning ruins on the Canadian River north of there. They may be there, or again there may be a gap between the Pueblo type of house which we found at Watrous to the west and the Texas type to the east. In several days' search we found, north of Logan, a camp site of the nomadic Indians, of which sites there must be many in the neighbourhood. Here on the surface we picked up quantities of rubbing stones which were probably the manos used on metates, several of which latter we also found. The ground was thick with pulverized bones, broken fire stones, flint chips and a few flint artifacts and pottery fragments, the latter clearly of plains type. Another day we wasted in finding some rocks with carvings on them, which turned out to be of cowboy or shepherd origin, and a third day afforded only some interesting mortar holes made in the rock ceiling which covered a small rock shelter.

From Tucumcari Mr. Satterthwaite had to return for the opening of the University, and Mr. Bache and I returned to Amarillo. We decided to do a few days' more work on the Alibates Creek site before proceeding south, but on arriving there found our deserted ranch house preëmpted by two young Texans who, doubtless unknown to the ranch overseer in his headquarters fifteen miles away, were happily engaged in distilling *mula blanca*. Our approach must have brought up to them visions of handcuffs, but they soon recovered. We pitched our tent on a nearby hill, hoping that relations with our unwelcome but unavoidable neighbours would not become strained. At daybreak the following morning our good friend Mr. Studer appeared with a telegram recalling Mr. Bache to Philadelphia. Without doing a stroke of excavation we packed all our equipment and, despite Amaryllis's frantic endeavours to break down in her vacuum tank, evidently sensing the loss of her last good driver, we reached the Santa Fé station just as the Missionary, eastbound, was shifting. In half an hour Amaryllis and I were alone.

The following day, September 19, we, in the Lindberghian sense, set off for the Rio Grande to spend the remainder of the expedition's time and funds in southern Texas, where we hope to secure some data bearing on the interesting and important problem of the relationships between the higher cultures of Mexico and the southern United States.

Del Rio, Texas, September 28, 1929.

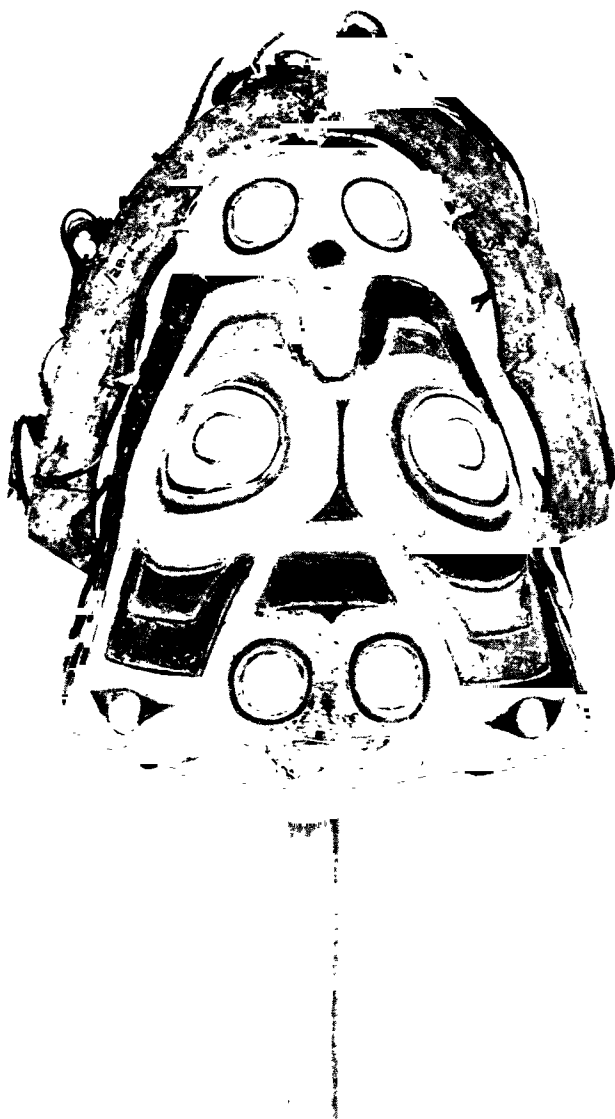
THE KAGUANTON SHARK HELMET

BY LOUIS SHOTRIDGE

AT last the Kaguanton Clan let go its oldest possession, the "Shark" Helmet (Plates XLVII and XLVIII). It is a very unique and ancient specimen, and so far as is known, the only one of its kind which existed in the land of the Tlingit. The helmet is made of the thickest part of the hide of the walrus, evidently shrunk-en, by a heating process, around a wooden form after the two pieces had been sewed together; it was then carved after it had thoroughly dried. The projecting parts, such as the lips of the shark and the eyes of the figure on the back of the helmet, are forced out and carved in relief, leaving the original surface of the hide; this surface was carved away from the part we recognize as the face of the fish. The hide is about one-half of an inch thick where the deep carving is executed.

There is sufficient evidence to believe that this very old piece was made long before steel tools were introduced into the Tlingit land, yet the clear cutting, said to have been done with an incisor tooth of the beaver and stone, is done in a manner which it is hard to believe could have been accomplished successfully with any but a well-edged modern instrument. The strip of the hide which encircles the head-piece, also carved, and ornamented with human hair and feathers of the flicker, is said to represent the Fish Hawk, with the beak of the bird attached at the peak. The helmet is painted with pure native colors; the greenish blue derived from the covelline, a sulphide of copper, the black from coal and the red from ochre. A certain kind of shell is used for the teeth, and the eyes and mouth are ornamented with pieces of blue abalone shell.

I obtained this old piece for the Museum's collection from the last of the house group, the members of which are known as the founders of the Kaguanton Clan. When I carried the object out of its place no one interfered, but if only one of the true warriors of that clan had been alive the removal of it would never have been possible. I took it in the presence of aged women, the only survivors in the house where the old object was kept, and they could do nothing more



The Kaxajon Shok H. (bwa.)

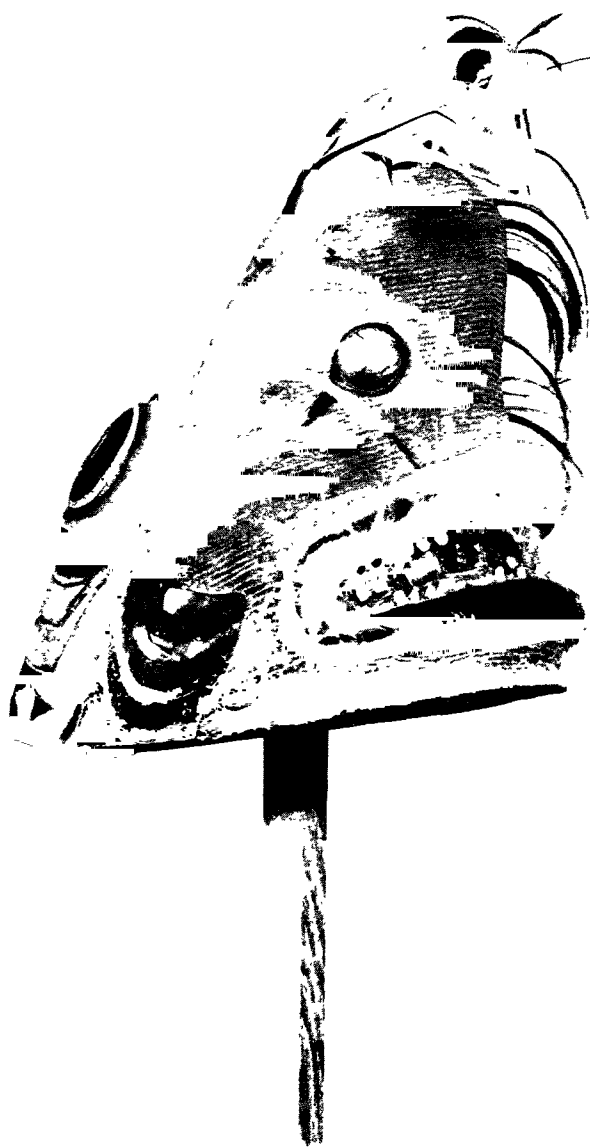
than weep when the once highly esteemed object was being taken away to its last resting place.

The Kaguanton, in its early history, was a party of men who were never afraid of adventure. They were hardened men, good fighters, and good losers in war. They were noted for their war-like nature, but they were no more savages than the present time warriors who fight for that which they believe to be just. In the record of these old-time fighting men, honour seemed to have predominated even above wealth, therefore good traders were not many among them. They seem to have shown a dislike for being burdened with accumulation of property, yet there never was anything too good for them.

The abandoning of the Shark Emblem is one instance which shows the Kaguanton dislike for anything in the nature of indolence and cowardice. As it was told in the story about the "Midnight Council", when chief Stuwuka said, after being reminded of the Shark Emblem: "If this Shark is to maintain its rank in our history, why does not this indolent animal appear in a true man's dream? Cast out from your minds, Kaguanton, this cowardly fish which, with its rows of sharp teeth, would only slink in presence of danger, and only take advantage of a helpless being. Think of the 'Wolf' now; he is bold and will fight when necessary."

The council referred to took place at Grouse Fort, long after the organization of the Kaguanton Clan, when the Wolf Emblem was in question. It was at this time when, true to its nature, the Shark quietly sank to the bottom of the chest of relics, only to make its appearance when occasion called for so doing. Thus, from the beginning of its history, the old object existed in an indifferent attitude, because of lack of interest on the part of its assumed owners. The helmet was made for Yiskahua the warrior, who was entitled to make a public exhibition of his helmet during the ceremony of dedicating the Kawagani Hit, "Burned House", the first council house which was founded by Yisyat I. At this time his party resided at Sand-mount Town, an old town now abandoned, located in the neighborhood of Cross Sound, a waterway between the mainland and the northern terminus of Chicagof Island.

In the beginning the name Kaguanton was applied to a house group which eventually developed into the greatest clan of the Shungoo-kaedi moiety of the Tlingit nation. Being without necessary tools the old-time builders employed the fire in reducing the main



The Shark Helmet.
Side view.

timber supports for the new council house, to uniform sizes. Thus, the name of the first house of the clan, from which the first group took its name, Kawagani-hit-ton, "Burned-house-inmates". Very quickly this very prolific group developed into a clan which spread very widely, and to this day are met almost everywhere, not only in Alaska, but there are a few in Europe, China and Japan, even here in Philadelphia. But these modernized men are not at all like the true Kaguanton—their spirits have been much impaired by too much comfort.

Even though the "Shark" had failed to maintain its rank among other emblems of the clan, it was looked upon with respect, because it represented the efforts of the men who founded the party. Therefore, like any other important object, a true Kaguanton guarded it with diligence. It is true that the modernized part of me rejoiced over my success in obtaining this important ethnological specimen for the Museum, but, as one who had been trained to be a true Kaguanton, in my heart I cannot help but have the feeling of a traitor who has betrayed confidence.

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I give and bequeath to the Trustees of the University of Pennsylvania the sum of.....dollars, in trust for the uses of the University Museum. (Here, if desired, specify in detail the purposes.)

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